2024 Planning Conference – Redefining Excellence

Board of Visitors, Board of Trustees Executive Committee, President's Council & Alumni Association Thursday, July 25, 2024 | Horizon Hall Room 2014

7:45 a.m.	Continental Breakfast – Horizon Hall, Room 2014 Exterior			
8:15 a.m.	Welcome Remarks & State of the University Gregory Washington, President			
9:15 a.m.	Introductions – New Board of Visitors Members Horace Blackman, Rector			
9:30 a.m.	Corporate Workforce & Alignment with Academic Degrees Julie Coons, President & CEO, Northern Virginia Chamber of Commerce Jennifer Taylor, President & CEO, Northern Virginia Technology Council Liza Wilson Durant, Associate Provost, Strategic Initiatives & Community Engagement, Facilitator			
10:45 a.m.	Break			
11:00 a.m.	Fulfilling Our Vision: How Power the Possible is Transforming Mason Trishana Bowden, Vice President, Advancement & Alumni Relations/President, GMUF Gregory Washington, President			
12:15 p.m.	Morning Wrap Up Gregory Washington, President			
12:20 p.m.	Lunch / Horizon Hall Reading Wall Atrium			
1:15 p.m.	Building Financial Sustainability & Effectiveness Deb Dickenson, Executive Vice President for Finance & Administration Jackie Ferree, Senior Vice President for Operations & Business Services Sharon Heinle, Vice President for Finance			
2:00 p.m.	Break			
2:15 p.m.	Generative AI – A Force for Positive Disruption Ravi Pendse, Vice President for Information Technology and Chief Information Officer, Special Advisor to the President for India, Professor of Engineering Practice in Electrical Engineering and Computer Science, University of Michigan			
3:00 p.m.	Al Across Mason Nation Amarda Shehu			
3:15 p.m.	Discussion – Path Forward Gregory Washington			
4:15 p.m.	Reflections & Closing Comments Gregory Washington			
4:30 p.m.	Reception - Horizon Hall, Room 2014 Exterior			



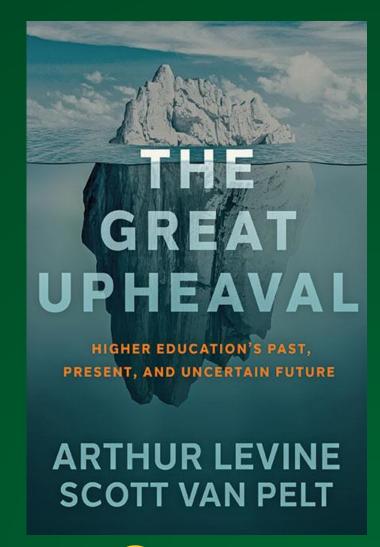
FY25 Planning Conference

Gregory Washington
President

This year's theme: Redefined Excellence

Bottom Line Up Front

- Continued strong performance in our best year in history
 - Largest 4-year institution in Virginia
 - #1 in Virginia for innovation and social mobility
 - 21 graduate programs in the Top 50 for publics
 - 14 graduate programs in the Top 50 overall
- Best rise in rankings
 - No. 33 Wall Street Journal, No. 40 Forbes, No. 51 U.S. News
- Thriving in the toughest academic environment in at least 50 years
- It's an election year! Political issues persist.
- Strong management of our finances in a difficult environment. Cost pressures continue.
- Strong plan for success
- Performing in alignment with Governor's Higher Education Agenda





Higher Ed in CRISIS

- Value proposition in question
 - Broken funding model especially some privates
- **Economic challenges (inflation, budget cuts, etc.)**
- **Enrollment cliff**
 - Demographic challenges
- Mental health crisis
 - Affecting students and faculty
- Academic disciplines under scrut
 - Curricula challenges
 - Faculty/administrat
 - DEI challer





You Don't Need College Anymore, Says Google

If you can earn \$93k after taking a \$300 course, then what's the of higher education?



Stress p

om Nobody's Talking About: The Male**auation Gap**

By Kelly Field | June 14, 2022

Men have trailed women in degree completion for decades. Why aren't colleges doing anything?



Americans Rank A Google **Internship Over A Harvard** Degree



Brandon Busteed Contributor ©

Digital Skills / Digital transformation / Future of Work

Why Apple (and Other Tech Companies) No Longer Require a Degree

Higher Ed in CRISIS – Are We All Together Different?

National Challenges	George Mason Solutions
Value proposition in question	Highest ROI in the state , 73% of graduates reside in Northern Virginia, largest producer of talent. Among the highest salaries in the state for graduates. New programs based in areas of highest need.
Economic challenges	Cost of attendance less than inflation , lowest administrative cost per student and admin/instructional cost among Virginia publics. Highest cost of living area.
Enrollment cliff	Continuous enrollment growth for more than the last 10 years. Programs in place to protect growth (Mason Virginia Promise, Early Identification Program, direct entry).
Mental health crisis	Increased mental health support by 35%, added TimelyMD and institution-wide mental health task force
Academic disciplines under scrutiny	?



Higher Ed in CRISIS – Are We All Together Different?

National Headline	George Mason's Reality
The cost of college has exploded.	Cost of attendance has increased only 1.4% per year since 2019, and only 2.4% per year since 2013.
A college education equates to lifelong debt.	The average George Mason student borrower owes less than \$26K and perstudent debt has declined since 2019.
The ROI of a college degree is declining.	Wages for George Mason graduates are among the highest in the state and are at an all-time high (100% more than high school graduates).
Liberal arts degrees are a waste of money.	Although slower to start, liberal arts graduates typically experience rapid wage growth in their late 30s-40s – the fastest among any college major.
Degree holders aren't any better off.	College graduates report higher rates of job satisfaction , financial well-being , and health .



George Mason Challenges

- George Mason is still underfunded.
- We operate in one of the Top 10 most expensive regions in the country.
- Too many units are compensated below market.
- We do not have enough staff in some areas.
- Additional state support is a plus, but we still have significant ground to cover.
- How we handle additional resources in the future (increased salaries vs. additional staff) will be key to our sustainability.



Changing Athletics Landscape

- On May 22, the NCAA and the power conferences ACC, SEC, Big Ten, Big 12 and Pac-12 voted to approve a settlement for three antitrust lawsuits, most notably House v. NCAA.
- This settlement resolves three separate antitrust cases House v.
 NCAA, Hubbard v. NCAA and Carter v. NCAA all from athletes claiming the NCAA violates antitrust law.
- There are two important components of this settlement:
 - About \$2.8 billion that all conferences and the NCAA will pay to current and former athletes, starting from 2016, over the course of the next 10 years.
 - The second is a framework where conferences and schools would directly pay student-athletes. There are two different ways for college athletes to make money - NIL and revenue sharing.
 - George Mason will lose about \$300K \$400K for the next decade.
 - George Mason will need about \$4.5M in permanent money over the next three years to compete in men's and women's basketball.
- U.S. Appeals Court ruled on July 11, 2024 that college athletes may qualify as employees.





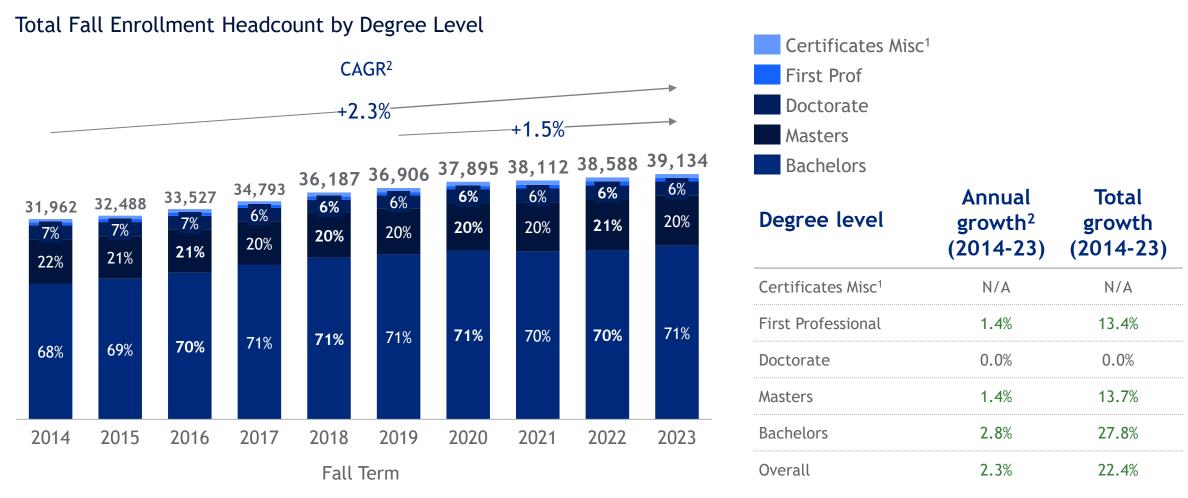
2023-2024 Presidential Performance Metrics

Priority	Proposed	Status	Notes		
Deliver a distinctive and inclusive student experience that fosters lifelong	Manage cost growth by executing on core components of the Critical Vacancy Plan		E&G deficit decreased to about \$14M, ahead of our projections		
engagement	Grow undergrad enrollment by 1.5%		Spring 2024 undergraduate enrollment grew by 1.8%		
	Grow graduate and law school enrollment by 1.5%		Spring 2024 graduate and professional enrollment (law school) is down by 1.8%		
	Grow Mason Korea enrollment by 3%		Spring enrollment grew by 12.3%		
Expand the impact of Mason's research, scholarship, and creative enterprise	Grow research awards and/or expenditures by 5% (15% stretch goal) each year		FY24 Total Sponsored Expenditures up 26%		
Accelerate economic and social impact	Grow corporate support by 5% each year		\$18.1M toward \$12.5M FY24 corporate support goal		
	Maintain or improve rankings		Highest rankings in history		
	Maintain gifts and fundraising at \$100M		\$101M toward the \$100M FY24 goal		
Exemplify a university culture of diversity, equity, and inclusion	Completion of recommendations outlined in the ARIE Initiative		14 out of 15 recommendations completed		
	Maintain designation as a Minority Serving Institution		Redesignated in April 2024		
Invest in faculty and staff success	Implement FY24 Mason's portion of the state government compensation increase		Compensation increases went into effect December 10, 2023. FY25 increases implemented effective June 10, 2024.		
	Establish 2 new programs where faculty and staff are recognized		Honorific committees established in all units. Upgraded President's faculty and staff awards.		

The Youngkin Administration Higher Education Agenda

Priority	Points of emphasis	Score	Notes
	Redefine success as career-aligned job attainment, efficient attainment of credentials and degrees, and continual upskilling and reskilling for all		88% of Class of 2023 respondents were employed in positions related their career goals. 73% of in-state Mason graduates stay in Virginia.
PREPARE STUDENTS FOR	Prioritize aligning curriculum, programs, and requirements to our state's most in-demand workforce needs		New programs in CyberSecurity Engineering, Cloud Cop Engineering. State's first College of Public Health
HIGH DEMAND JOBS IN VIRGINIA	Prioritize a meaningful internship or work-based learning experience as part of the college experience		More than 15,000 internships are posted in More an experiential learning opportunity
	Conduct a multi-year study on the future of higher education in Virginia to ensure our higher education system is focused on preparing graduates for the jobs of the knowledge economy		In the Class of 2024, 41% graduate students earned degrees in STEM and Wirginia and 2000 main in Virginia after graduation.
	Prioritize vibrant, safe, and healthy campuses that allow students to grow and foster relationships through in-person learning		andex and a Gold rating for being a military friendly
PROMOTE A VIBRANT, SAFE, AND HEALTHY CAMPUS	Value and promote a campus culture that embraces and prioritizes free inquiry, civil discourse, and a commitment to free speech	aligh	or the Foundation for Individual Rights and Expression (FIRE). attle tested over the last four years.
	Prioritize the mental health and well-being of students, for the students of s	G.	Initiated TimelyCare, a free 24/7 virtual mental health and well-being service with a licensed provider. Created chief mental health officer role. Established Mental Health and Well-Being Task Force.
	Reduce costs and keep tuition low for solutions that come from lever methods, partnerships methods, partnerships methods, partnerships methods.		88% of Class of 2023 respondents were employed in positions related to heir career goals. 73% of in-state Mason graduates stay in Virginia. New programs in CyberSecurity Engineering, Cloud Company of Students and Students of Students in CyberSecurity Engineering, Cloud Company of Students in the Class of 2024, 41% of Students in CyberSecurity Engineering, Cloud Company of Students in CyberSecurity In the Class of 2024, 41% of Students in CyberSecurity In the Class of 2024, 41% of Students in CyberSecurity In the CyberSec
MAINTAIN AFFORDABILITY AND REDUCE THE COST OF HIGHER EDUCATION	Conduct staffing, overhead, academic majors and attention on spending and procurement		Manage cost growth by executing on core components of the Critical Vacancy Plan
insoni	Spring 2023 Crating cost transparency and financial health and outcomes a strategic and reimagined six-year plan process to be implemented		Leveraged 6-year plan and Fact Pack with multiple audiences to enhance transparency and demonstrate performance trends and aligned 6-year plan priorities with Mason's strategic plan
BUILD TO LEGE AND CAREER LADY PIPELINE IN PARTNERSHIP WITH	Launch lab schools across the Commonwealth at all of Virginia's public and private institutions and higher education centers		Launched 2 Lab Schools: Accelerated College and Employability Skills (ACCESS) Academy, a collaborative partnership with NOVA and Loudoun County Public Schools and Shenandoah Valley Rural Regional College Partnership Laboratory School for Data Science, Computing and Applications.
K-12 SCHOOL DIVISIONS	Strengthen "Pathway Programs" which provide pipelines and specific programs for underserved students across the Commonwealth		Most successful pathway programs in Virginia: The Mason Virginia Promise extends the ADVANCE Partnership with NOVA to select community colleges around the state. The Early Identification Program partners with students starting in the 8 th grade.

How is overall enrollment trending over time?

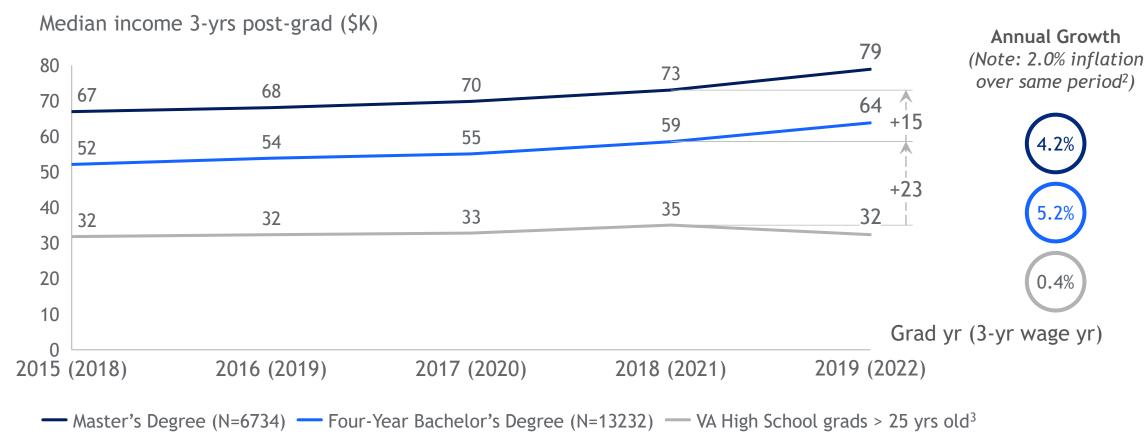


^{1.} Sum of less than one-year certificates, one plus year certificates, post bachelors certificates, and post masters certificates. Does not include "students not program placed," which is included in the Excel backup 2. "Annual growth" calculated as compound annual growth rate (CAGR)

Note: Some categories are not visible on some bars because they are less than 1% of yearly enrollment.

Source: Data from State Council of Higher Education for Virginia (SCHEV) Research Center Enrollment Report E33: Fall Enrollment by Degree Level

How much excess wages are generated by higher-ed degrees¹ vs. high school degrees?



^{1.} Only included degrees with >10% of enrollment to ensure large enough N 2. CPI 2017-2021 for Washington-Arlington-Arlington-Arlington-Alexandria, DC-VA-MD-WV 3. Wages for Virginians ages 25+ with no more than a high school diploma or equivalent, wages defined as wages, salary, Armed Forces pay, commissions, tips, piece-rate payments, and cash bonuses earned before deductions were made for taxes, bonds, pensions, union dues, etc....and net income from self-employment."; 2020 includes 5-year estimates due to COVID-data disruption

Note: Years represent median wage 3 years post grad in VA of students who graduated in the year combined and students who graduated in the 4 previous years with wages adjusted for inflation to the most recent year of wages, in order to allow for reporting at the program-level; only includes wage data from VA from employers covered under state unemployment insurance; Only included programs with >10% of enrollment to ensure large enough N

11

How do wages for the largest programs¹ compare to other schools?

	median wage grad vs. ic & private reporting inst. ²	Diff. in wage growth vs. all 4-yr public inst.	Median inc. Mason grads	% of Mason grads ³	Sample size (N)	Capture rate (N /grads)
4-year Bachelor's						
Psychology, General	9	-3 pp	\$43K	4%	990	55%
Criminal Justice/Police Science	0	0 pp	\$54K	3%	887	57%
Information Technology	1 2	-1 pp	\$87K	3%	977	69%
Biology/Biological Sciences, General	13	-2 pp	\$44K	3%	596	44%
Accounting	7	-2 pp	\$71K	3%	806	60%
Rhetoric and Composition	10	-1 pp	\$53K	3%	577	49%
Registered Nursing/Registered Nurse	6	1 pp	\$72K	2%	641	66%
Management Sciences and Quantitative Methods, Other	0	0 pp	\$79K	2%	614	64%
International Relations and Affairs	-7 🔼	-4 pp	\$49K	2%	355	37%
Finance, General	-1	-3 pp	\$71K	2%	477	50%
Liberal Arts and Sciences, General Studies and Humanities, Other	4	3 pp	\$55K	2%	567	61%
Business Administration and Management, General	13	1 pp	\$64K	2%	502	55%
Political Science and Government, Other	I 1	1 pp	\$54K	2%	310	36%
Economics, General	-7	-4 pp	\$61K	2%	310	38%
Community Health and Preventive Medicine	0	0 pp	\$46K	2%	411	52%
Computer and Information Sciences, General	9	-5 pp	\$100K	1%	396	64%
English Language and Literature, General	7	-1 pp	\$51K	1%	329	57%
Law (First Prof. Degree)	10	0 pp	\$48K	2%	230	30%
Master's						
Curriculum and Instruction	7	-2 pp	\$65K	4%	1%	1%
Special Education and Teaching, General	14	2 pp	\$67K	2%	746	70%
Business Administration and Management, General		39 10 pp	\$113K	2%	278	39%
Public Policy Analysis, General	9	4 pp	\$84K	1%	158	26%
		FF	1 -			

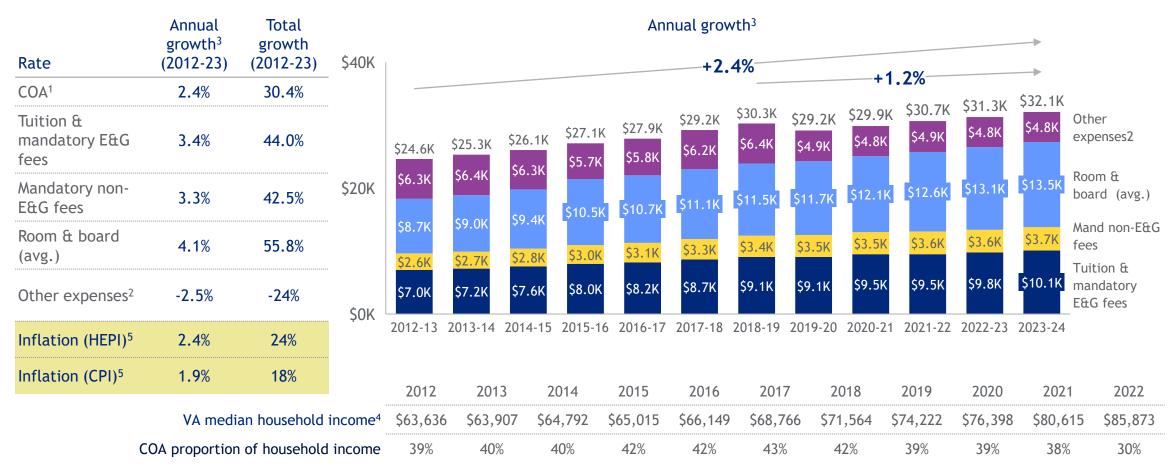
^{1.} Largest programs based on number of 2018 graduates with sample size (N) at least 100 up to 20 programs; excludes "Multi-Interdisciplinary studies, other"

Wage growth and absolute wages below peers

^{2.} Median wage of class of '18 and 5 preceding classes 3 yrs post-grad 3. 2017-2018 Graduating Year Source: SCHEV data extract, 4/'23

Chart (A): How has the total cost of attendance been changing over time?

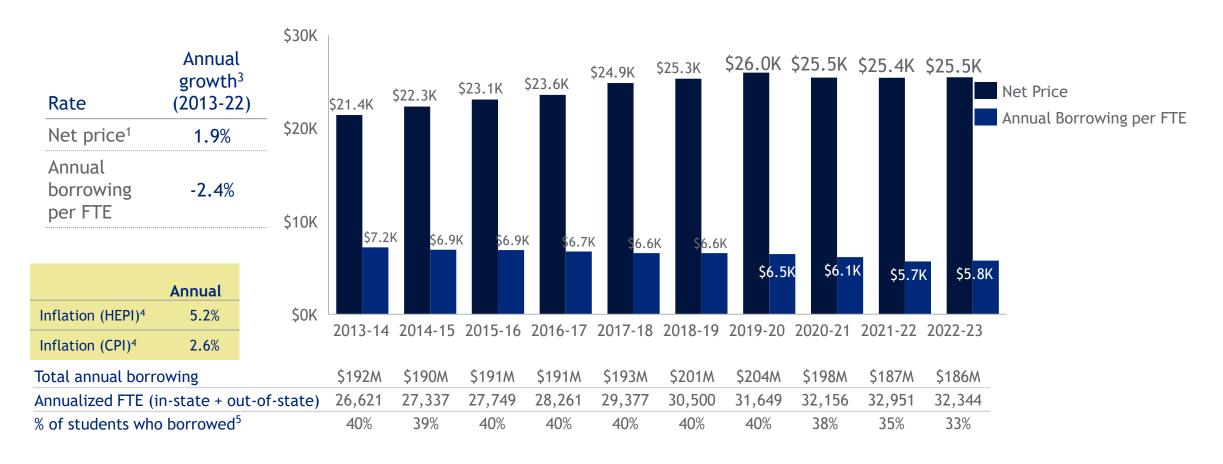
Breakdown of total cost of attendance (COA)¹ for in-state undergraduates [2012-2023]



^{1.} COA = calculated cost of attending the institution; includes transportation, room/board, tuition/fees, supplies, books and other expenses 2. Other expenses include transportation, supplies, books, and other expenses. Note 2023 data not available for other expenses so 2022 data was used as a placeholder. 3. "Annual growth" calculated as compound annual growth rate 4. Inflation-adjusted 5. Determined as growth in HEPI/CPI. Note HEPI estimate for 2023 as of June, 2023.

Chart (B): How much debt do students need to take on to cover net price?

Net price¹ vs. annual borrowing per total full time equivalents (FTE)² [2013-2022]



^{1.} Net price = total cost of attendance - financial aid (average) 2. Determined as total annual borrowing (e.g., private Perkins, Stafford, Plus loans) divided by annualized FTE 3. "Annual growth" calculated as compound annual growth rate (CAGR) 4. Determined as annual growth in Higher Education Price Index over period 5. Determined as the number of students with loans divided by total reported enrollment; excludes non-degree, unclassified, and certificate programs; only includes associate, bachelor's, master's, first professional, and doctor's degree programs

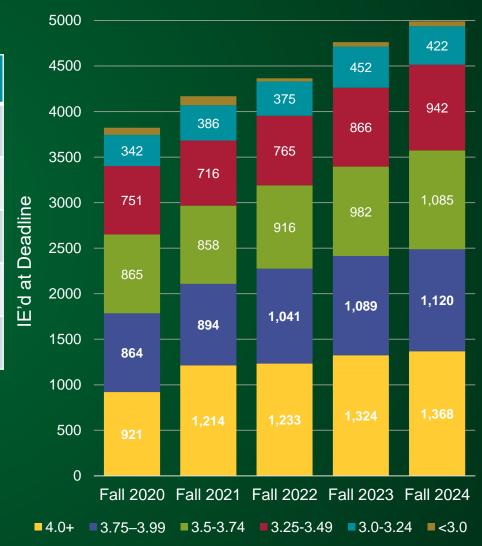
Source: Data from SCHEV Research Center Financial Aid Report FA19C: Trends in Annual Borrowing Per Annualized Student FTE

Increasing Enrollment Does Not Mean Decreasing Quality *Freshman Deposits vs. Student GPA*

- Higher admit rate usually means lower student quality
- Average student GPA has increased since start of the pandemic
- Number of 4.0+ students has increased as well (27% of entering freshman class)
- Greater than 70% of the entering class has a 3.5 or above

App Market Group	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024
International	3.57	3.49	3.60	3.66	3.64
Northeast	3.65	3.69	3.69	3.69	3.72
Other OOS	3.70	3.75	3.77	3.79	3.72
VA	3.71	3.75	3.76	3.74	3.74
Grand Total	3.70	3.74	3.74	3.74	3.73

Freshman Deposits by HS GPA (N)

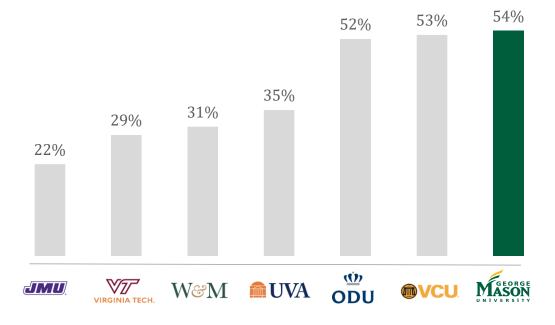




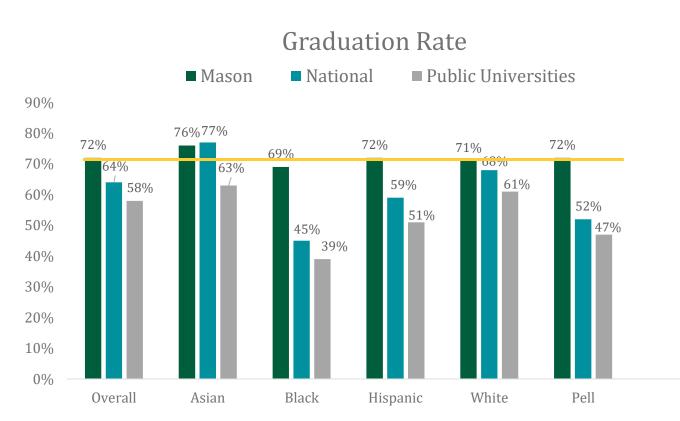
Student Success

Mason is the most diverse 4-year public university in Virginia...

% Underrepresented Populations



There are minimal disparities in 6-year graduation rates....



The Mason Difference - What do I Broadly diverse Gender, class, ethnicity, and thought Fiercely inclusive No matter who you are or what background you are from, you can find your place here - We put systems and structures in place for student success Supporters of freedom Academic Speech Thought Innovative

Scale Fast, Fail Fast

Our Plan for Success FY25 – Redefining Excellence

Students First

- Student Bill of Rights
- Mason VirginiaPromise
- Free Speech Campus
- Double the Early Identification Program
- Expand direct entry

Grand Challenge Focus

- Establish Mason's Grand Challenges
- ConversationsAcross DifferenceDebate Series
- AI Initiative
- Invest in our faculty and staff
 researchers

Cost of Degree

- Reduce cost of degree
- 3-Year degree
- Debt-Free University
- Expand scholarships
- Access Academy (Lab School)

Partner or Perish

- Comprehensive campaign
- Medical education:
 - INOVA, Adventist, VHC
- Fairfax West Campus expansion
- Invest in our faculty and staff



Students First – Student Bill of Rights (Draft of Examples)

- 1. Students have the constitutional right of free speech, assembly, and expression.
- 2. Students have the right to a seamless admission process.
- 3. Students have the right to resources to help them succeed.
- 4. Students have the right to see syllabi before they take courses.
- 5. Students have a right to see the evaluations of a teacher or a course before they take a course.
- 6. Students have the right to express concern about their instruction and seek recourse.
- 7. Students have a right to an education that they can afford.
- 8. Students have a right to physical safety.
- 9. Students have a right to free elections of their peers to lead them.



Students First

- Free Speech Campus
 - Dialogue and Difference Debate Series. You don't learn as much when you talk to people who only see the world as you do. You learn more by engaging those who disagree.
 - -Spaces need to be safe enough. Not too safe where you don't encounter any opposition. And not so unsafe where you are too afraid to learn.
 - Physically safe and intellectually challenged
 - -Establish free speech zones where people can safely engage even when the opposition says things that are reprehensible
- Apollo-like internship program
 - Triple the number of internships over five years



Cost of degree

- Reduce cost of degree by 2% per year for five years:
 - Scholarships
 - Corporate partnerships with supplements
 - Paid experiential learning
 - Expanded co-op
 - Increase productivity through automation and AI
 - Measured by reduction in student debt and net payments (what they pay after the resources we provide)
- Decrease time to degree
 - Explore 3-year degree programs, starting with enhanced transfer pathways
 - Explore scaling of Lab School concept where students earn credit in high school



Unprecedented Global Challenges



Level 1

Climate change

Water scarcity

Energy security

Cybersecurity

Global financial structure

Biodiversity and ecosystem losses

Fishery depletion

Deforestation

Infectious disease

Eliminate our way of life

Level 2

Aging population

Poverty

Education

The digital divide

Urbanization

Intellectual property

International labor and migration

E-commerce rules

Biotechnology rules

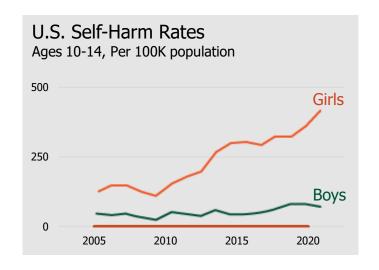
The quest for talent

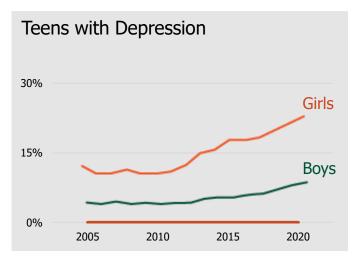
Maritime safety and pollution

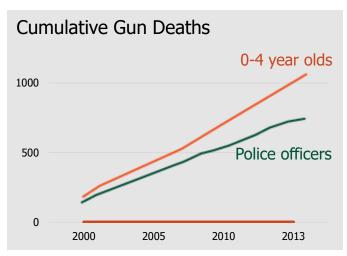
Disrupt our way of life

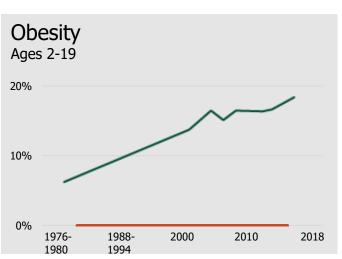


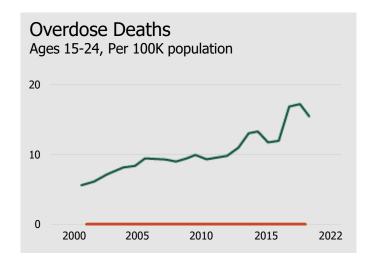
So Many Problems That Need Solutions













Pathway Forward

- Why Grand Challenge focus?
 - In a resource-limited world, Grand Challenge issues will be among the few areas supported
- Establish a faculty-led committee to develop a Grand Challenge Strategy
 - Committee will be charged by the Vice President for Research and the President



Why AI, why now?

- We need a holistic approach to integrating teaching and learning about AI
 throughout our academic and research programs to ensure every graduate is
 prepared to live and work in a world radically changed by technology in the
 coming decades.
- We don't need another program within the university. We need an institution-wide recognition of the centrality of AI to the future of knowledge creation, scientific discovery, creative expression, workforce development and campus operations.
- In the short term, our graduates won't lose their jobs to AI. They
 will lose their jobs to peers who know how to leverage the
 technology.



Most will need AI basics, not expertise

Percent	Job Type	AI Descriptor
~1%	of knowledge-sector jobs will be advanced level	 The AI Visionary Designs novel Al algorithms; optimizes model architecture, parameters, and neural networks Approaches Al with original ideas and imagination. A futurist thinker.
~9%	of knowledge-sector jobs will be intermediate level	 The AI Manipulator Can train AI models on sample data and has experience with frameworks like TensorFlow Understands learning tasks, can fine-tune AI models, and can deploy machine learning models
~90%	of knowledge-sector jobs will be basic level	 The Common AI User Understands basic AI concepts Has used AI through consumer apps and user-friendly large language models

DMV has the highest need for AI workers in the U.S.



AI's Transformative Opportunities for Higher Ed

- Incorporating AI into the curriculum to match societal, workplace changes
- Provide 24/7, personalized student support with one-stop conversational AI
- Supercharge faculty and staff productivity to pursue more strategic tasks
- Maximize enrollment and advancement yield with hyperpersonalized content generation
- Transcend historical bounds of innovation in research by using AI to expand human capabilities



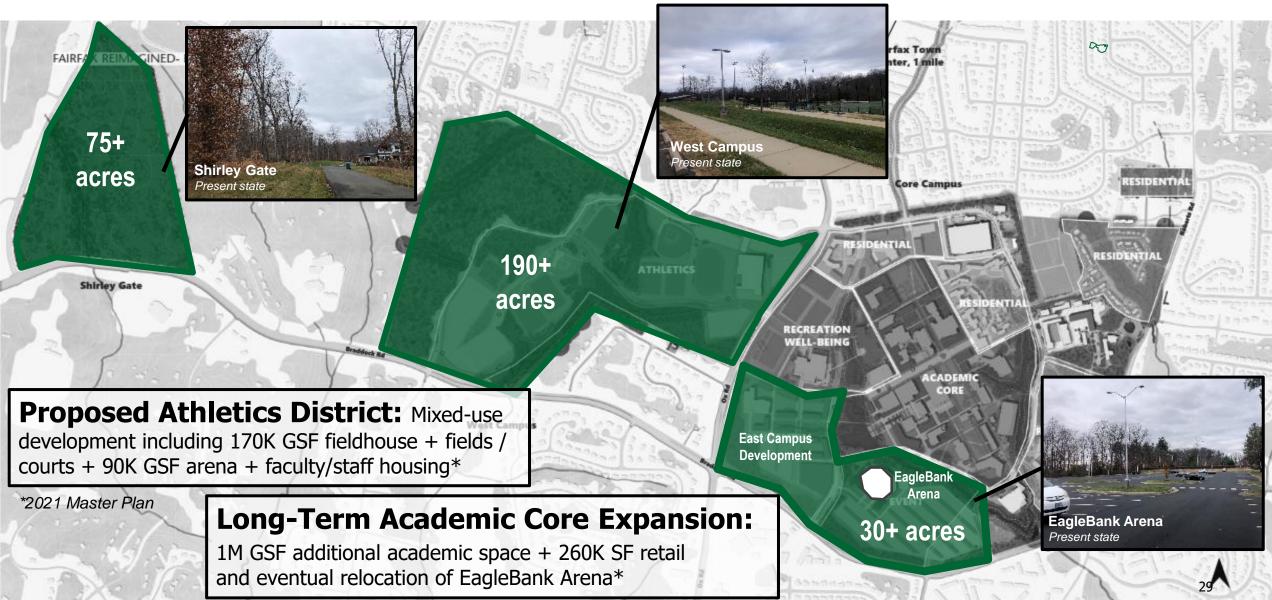
Why Develop/Expand our Campus?

- Student growth has significantly exceeded the number of rooms in our residence halls
- Current capacity will not allow for a sophomore residence hall requirement
- Existing athletic and exercise facilities are antiquated and/or obsolete
- Potential faculty and staff housing
- Major opportunity for philanthropy and partnership.
 Most can be implemented at NO COST to the university.
- Major opportunity for revenue generation



Project Overview – Proposed Campus Expansion

FAIRFAX CAMPUS AND PROJECT STUDY AREA

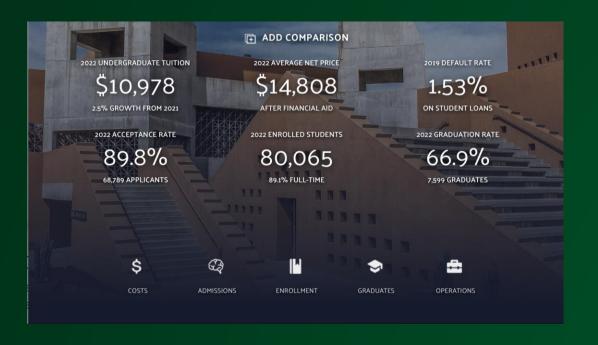


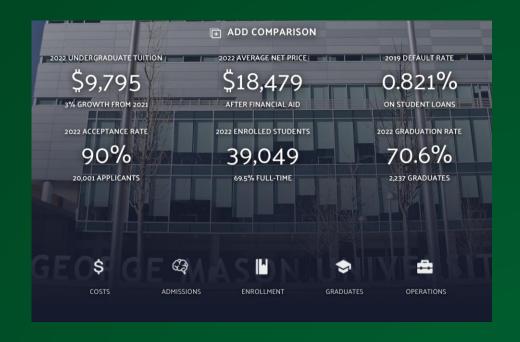
Process of Evaluation

- Mission Is the project in alignment with our basic values and ideals. Does it ultimately support our students, faculty and staff?
- Leverage Given that the campus is resource constrained, does the project have the proper fiscal support to not be a burden to the university?
- Resource generation Is there a real potential to generate continuous (permanent) cash flow? This can help offset future need for tuition increases.

4335 Chesapeake River Way

We are on a path. But to where?





- Which one is better?
- Which one is in the Association of American Universities (AAU)?
- We may be closer than you think.

We are on a path. But to where?





We may be closer than you think.

Ultimate Goal





• AAU member universities — 69 in the United States and two in Canada — are on the leading edge of innovation, scholarship, and solutions that contribute to scientific progress, economic development, security, and wellbeing.

How can you help?

 George Mason University was birthed out of a partnership of industry, government and concerned partners. We continue on that trajectory.

- Partnership/resources (philanthropy)
- Expertise/connections
- Engagement
- Advocacy



Thank You!

감사합니다 Merci Bien! Vielen Dank! 感謝! Obrigado!

Ευχαριστώ!

СПАСИБО!

Grazie!

谢谢!

დიდი მადლობა!

Tak!

Asante Sana!

iMuchas Gracias!











New BOV Members







Kenneth L. Marcus

- Founder and chairman, the Louis
 D. Brandeis Center for Human
 Rights Under Law
- Was a distinguished Senior Fellow in the Liberty & Law Center at George Mason's Antonin Scalia Law School

Nina S. Rees

- Senior Fellow, George W. Bush Institute
- Master's from George Mason in International Transactions in 1993.

Marc Short

- Partner, Advance Strategies
- Former Chief of Staff to Vice President Mike Pence.



Agenda:

- Welcome and Introductions
- Mason Now: Power the Possible Campaign Highlights
- Driving Fundraising Results through Partnership
- Role of GMUF in University Advancement
- What's Next and Where We Need Your Help
- Questions/Comments

MASON NOW

POWERTHE POSSIBLE

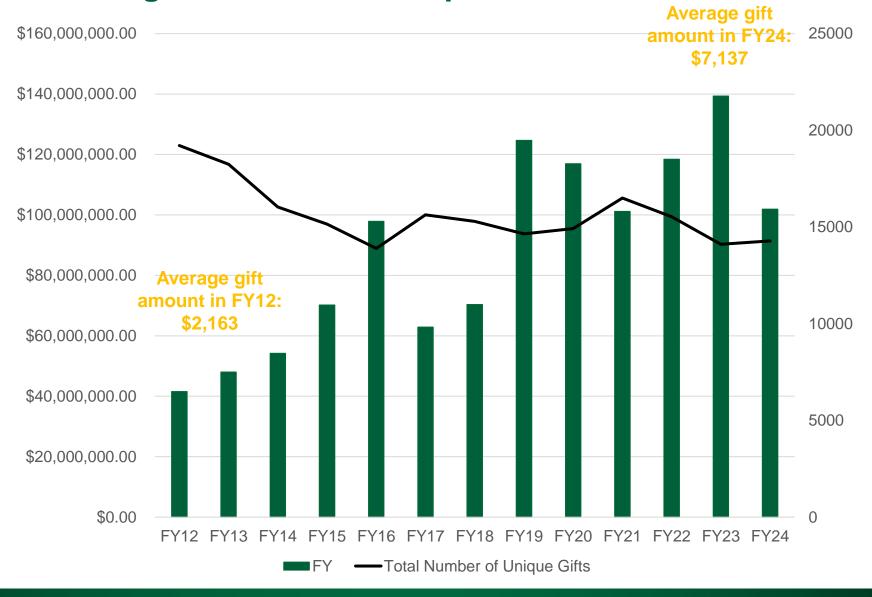
FY2021-FY2028 Campaign Highlights





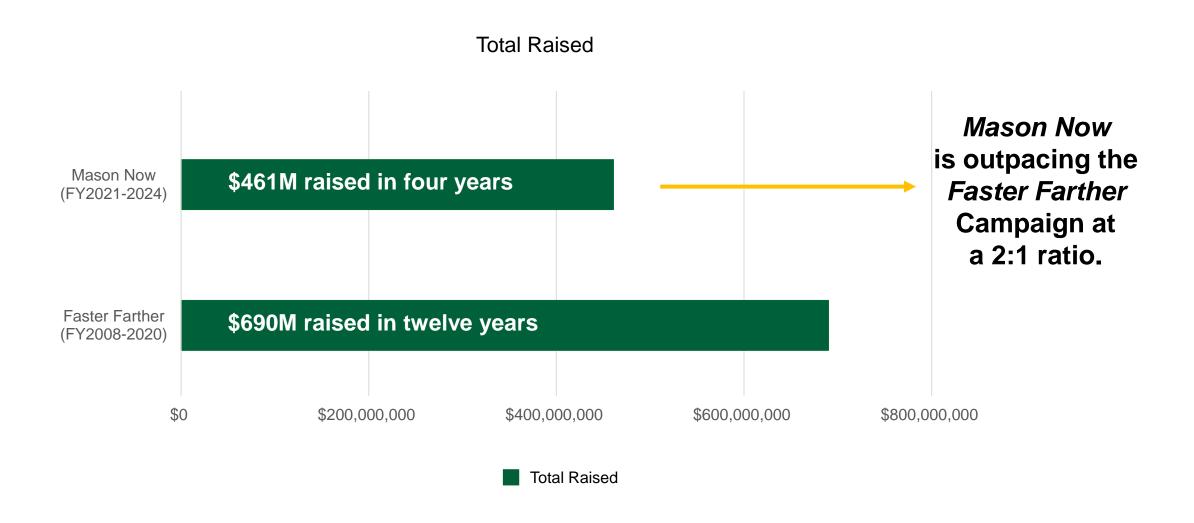
- Student Success
- Research
- Innovation
- | Community
- Stewardship

GM 12-year Fundraising Totals + Total Unique Gifts

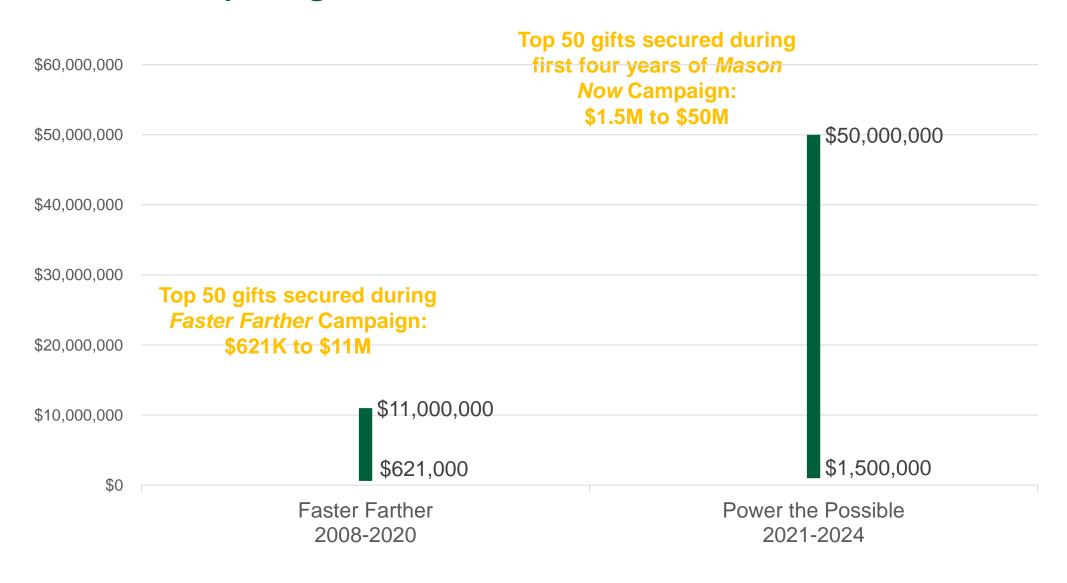




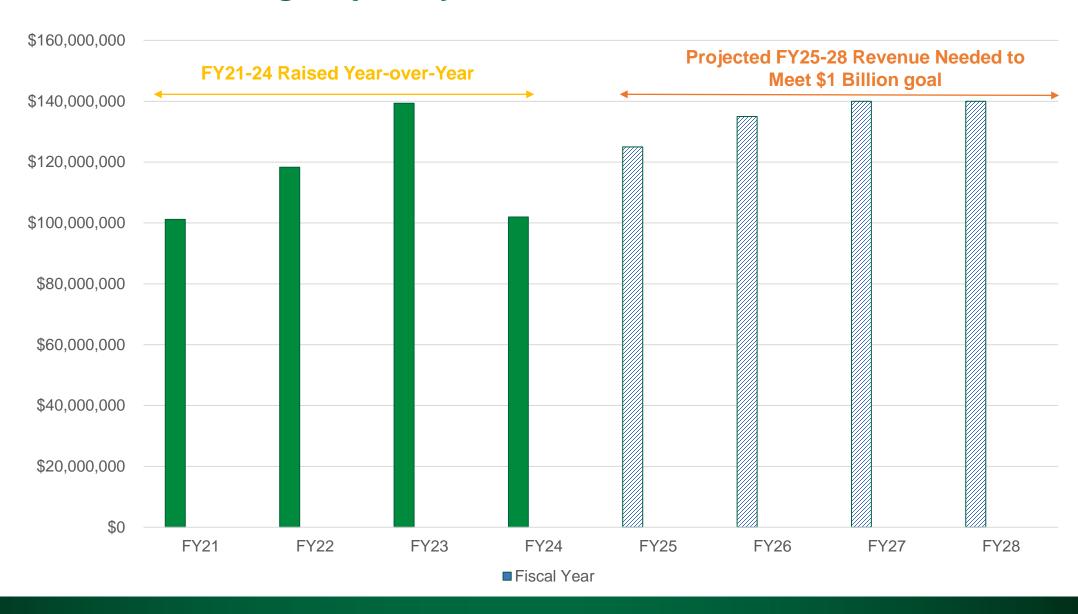
Mason Now: Outpacing Faster Farther



Mason Now: Outpacing Faster Farther



Mason Now: Fundraising Trajectory



Lessons Learned from Faster Farther



Maximizing and reimaging University fundraising positions



Heightened engagement of the corporate community



Stronger
integration of
fundraising roles
with Deans/VPs,
Center Directors,
faculty, and
volunteer leaders



Outreach and engagement with the alumni community

Mason Now: Campaign Timeline + Accomplishments

Planning and Preparation Phase

Lead and Major Donor Phase

Capstone Phase

FY21-22

FY22-23

FY23-24

FY24-25

FY25-26

FY27-28

- Dr. Washington arrives
- Launched training series with internal and external stakeholders
- •Launched PatriotForce database
- •Completed Internal Readiness Assessment
- •Est. GMUF BOT Adv. & University Priorities Committee
- Reorganized Central Advancement structure

Hired 2 AVPs to support all colleges and units

- •Built out the Alumni Relations team
- •Identified campaign benchmarks to all schools/units
- Completed GM strategic direction
- Identified initial campaign top prospect list
- Finalized campaign branding
- Received campaign capacity analysis

- Began recruitment of volunteer steering committee
- Executed campaign leadership launch and faculty launch
- Initiated campaign solicitations of Board and volunteer leaders
- •Expanded engagement with alumni and donors across the country

- Finalized University Case for Support + collateral materials
- Began campaign rollout to five major cities
- Continue solicitation of principal (7, 8, 9-figure) and major (6, 7 figure) campaign prospects

- Commence campaign rollout to next round of cities
- Begin Mathy House dinners for lead and major gift campaign prospects
- Secure lead and major gift commitments, striving to achieve 75% of campaign goal

- Engage all GM constituencies in the campaign
- Conduct campaign celebration event and recognize volunteers
- Determine postcampaign goals to maintain momentum



Driving Fundraising Results through Partnership:

Enhancing Fundraising Skills and Clarifying Roles

Central Advancement kicked off a training series four years ago. Highlights include:

- Fall 2021: Developing inspiring, transformational funding ideas
- Fall 2021: Storytelling and messaging training within George Mason's new brand framework
- Spring 2021: Relational fundraising and utilizing prospect research
- Fall 2022: Training on the campaign theme and fundraising priorities

- Spring 2022: Assessing campaign readiness using the four key elements for fundraising success
- Spring 2023: Prospect and donor engagement and relationship mapping
- Winter 2024: Experiential learning opportunity with a panel of leading philanthropists on fundraising from the donor's perspective
- Summer 2024: Opportunities and challenge in making lead and major gift solicitations

Driving Fundraising Results through Partnership:

Successful Case Studies with GM's Schools, Colleges, and Centers

Carter School for Peace and Conflict Resolution

 \$10 million gift for the Center for Peace, Tech, and Entrepreneurship

Center for Visual and Performing Arts

 \$10 million naming gift from Barry Dewberry and Arlene Evans to the Center for the Arts

Costello College of Business

 \$50 million naming gift from the Estate of Donald G. Costello establishing the Donald G. Costello College of Business

College of Public Health

 \$4.85 million anonymous gift to support groundbreaking research on bruising and injury detection

Volunteer Leadership Entities Supporting George Mason



George Mason
Foundation
Board of
Trustees

George Mason Board of Visitors George Mason Alumni Association Board

Central Advancement Team



George Mason University Foundation

- The George Mason University
 Foundation was established in 1966 to receive, manage, invest, and administer private gifts for the benefit of the University, including endowment and real property
- It is a 501(c)3 organization, separate and independent from George Mason
- Ensures that donor funds are managed and spent in accordance with donor intent
- Governed by the 45 Board of Trustees, separate from the University's Board of Visitors
- Manages a real estate portfolio for primarily university-related activities

Fundraising at George Mason is a university activity

George Mason University Foundation President also serves as Vice President of Advancement and Alumni Relations

Advancement and Alumni Relations, Vice President George Mason
University
Foundation
President

Endowment Opportunities During a Campaign

Institution	Total Enrollment (Fall 2023)	Endowment (FY23 market value)
George Mason University	40,184	\$179.3M
University of Virginia	25,944	\$9.8B
Virginia Commonwealth	28,594	\$2.6B
Old Dominion	22,541	\$328.7M
Virginia Tech	38,294	\$1.79B
William & Mary	9,762	\$1.36B



Mason Now: How can you help?

Make George Mason a top philanthropy priority and support this campaign as a philanthropic leader. Provide introductions and information on prospects for 7, 8, and 9 figure transformational gifts.

Host/co-host small intimate gatherings to bring together the prospective leaders of this campaign.

Don't forget about George Mason! Connect your story to George Mason's story and share it with everyone you speak with.





Thank You

Trishana E. Bowden

Vice President, Office of Advancement and Alumni Relations President, George Mason University Foundation tbowden2@gmu.edu



- Power the Partnership: Leveraging the expertise and abilities from Mason's schools, colleges, centers, and institute to foster impactful corporate partnerships that tackle pressing societal issues.
- President's Innovation Advisory Council (PIAC): The PIAC is a collective body that includes advocates from Mason, along with leaders from the industry, community, and government who are responsible for providing direction, foresight, and advice on various aspects such as placemaking, programming, and partnerships.
- Cultivate a Strong Tech Talent Ecosystem: Amplifying philanthropic contributions for Mason's existing programs that bolster the Commonwealth's Tech Talent Investment Program

Fuse Prospects





Budget & Mitigations Update

On an all-funds basis, George Mason is operating on a balanced budget with an E&G shortfall being covered by non-E&G funds

In FY2024, George Mason implemented a two-year plan to mitigate our E&G budget shortfall through units reducing their budgets by 6% overall

Year One: In FY2024, budget mitigations were achieved in the areas of Position Eliminations, Revenue Enhancements, and Cost Savings

Year Two: The FY2025 Operating Budget continues the mitigation plan implementation

FY2025 Budget Operating

- University continuing growth trajectory
- Break-even is achieved through positive margins in other funds to offset E & G shortfall
- Revenue increases in both tuition and State support offset increased expenses
- Expense increases driven by salaries & wages, contract cost escalations, and planned increase in financial aid
- Limited support for strategic investments given budget constraints

Note: Operating includes the following funds: Education and General (E&G), Auxiliary Enterprises, Sponsored Research, Indirects, Financial Aid. Other Restricted & Other Unrestricted. EXCLUDES Capital

Cash basis, in \$M's	FY 2023 Actual	FY 2024 Amended Budget	FY 2024 Q3 Forecast	FY 2025 Approved Budget [*]
Revenues				
Net Tuition and Fees	496	514	515	531
State Appropriations	267	327	326	359
Grants & Contracts	244	256	274	286
Auxiliary Enterprises	249	266	280	290
Other Operating Revenue	29	27	36	39
Non-Operating Revenue:				
Relief Funding	50	-	-	-
Total Revenues	1,335	1,391	1,432	1,505
Expenses				
Salaries and Wages	595	640	644	670
Fringe Benefits	163	187	184	198
Contractual Services	210	208	229	242
Travel	20	21	24	25
Supplies	27	28	25	25
Equipment	22	21	27	28
Capital Expenditures	4	3	1	2
Scholarships & Fellowships	164	187	193	199
Occupancy	41	45	41	42
Transfers-Capital Projects/Debt	135	58	61	64
AE Infrastructure	0	2	3	3
Total Expenses	1,381	1,399	1,432	1,497
(Shortfall)/Surplus	(46)	(9)	-	8
Strategic Use of Reserves	-	-	-	3
Balancing Mitigation Strategies	46	9	-	-
Adjusted Shortfall	-	-	-	-

^{*}This includes George Mason's estimated allocation of VMSDEP funding of \$7M

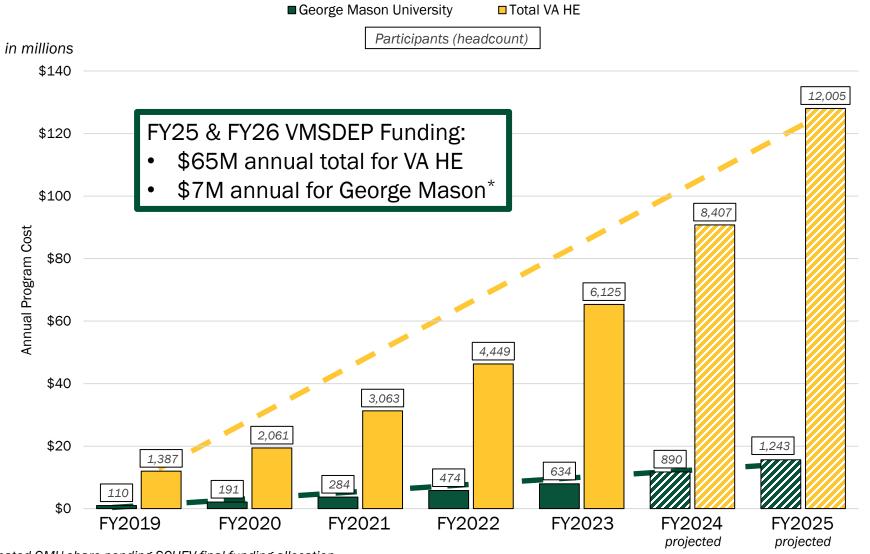
FY2025 Budget E&G Operating

- Continuing growth moderating expense growth to align with available resources
- Increased expenses due primarily to projected salary & wage increases and filling positions at market rate; continuing critical vacancy reviews of all open positions
- Strategic Use of Reserves represents **approved reserve-funded initiatives** planned for FY25
- Budget shortfall will be mitigated with planned budget reductions (2nd year), new revenue generation, and continued operating efficiencies from reorganizations & shared services

Cash basis, in \$M's	FY 2023 Actual	FY 2024 Amended Budget	FY 2024 Q3 Forecast	FY 2025 Approved Budget*	
Revenues					
Net Tuition and Fees	494	514	513	529	
State Appropriations	220	246	244	274	
Auxiliary Enterprises	1	1	1	-	
Other Operating Revenue	19	14	19	20	
Total Revenues	734	775	777	823	
Expenses					
Salaries and Wages	457	494	489	511	
Fringe Benefits	140	146	144	151	
Contractual Services	80	80	80	84	
Travel	6	7	7	7	
Supplies	18	17	16	16	
Equipment	11	11	15	15	
Capital Expenditures	2	1	-	-	
Scholarships & Fellowships	46	45	50	50	
Occupancy	22	24	21	21	
Transfers	31	3	(2)	(2)	
AE Infrastructure	(18)	(18)	(22)	(22)	
Total Expenses	796	810	798	832	
E&G Shortfall	(62)	(35)	(21)	(9)	
Strategic Use of Reserves	-	-	-	3	
Balancing Mitigation Strategies	62	35	21	6	
Adjusted E&G Shortfall	-	-	-	-	

^{*}This includes George Mason's estimated allocation of VMSDEP funding of \$7M

Virginia Military Survivor & Dependents Education Program VMSDEP Program Growth - Unfunded Mandate



- George Mason is one of the best places in the country for veterans to pursue higher education and we want to continue to provide this support at the highest level.
- We appreciate the Governor and General Assembly's initial investment and ongoing commitment to putting VMSDEP on a path towards long-term sustainability.

Budget Mitigation Achieved Budget Mitigations

Revenue Enhancements

- Patriot Investment Fund \$2.2M in FY24, \$4M projected in FY25
- Masonvale ground lease termination \$3.5M annual
- Vernon Smith Hall acquisition \$12M in FY24 (one-time), \$2M annual

Cost Savings/Cost Avoidance

- Vernon Smith Hall rent expense elimination \$4M annual
- Faculty Incentive Retirement Plan \$3M (5-year period)
- Freedom Aquatic & Fitness Center renegotiation \$2.1M (5-year period)
- Parking contract savings \$1.1M annual
- Janitorial service adjustments \$775K annual
- Library material reduction (duplicate & underutilized) \$750K annual
- Energy efficiency improvements \$475K annual

Budget Mitigation FY2024 Academic Position Reductions*

School	Position Reductions	Faculty Instructional	Faculty Administrative	Classified	Stipend	Total
College of Visual and Performing Arts (CVPA)	\$838,011	3	1	1	7	12
Costello College of Business (CCB)	\$1,408,321	4	1	4	9	18
Carter School (Carter)	\$68,650	1	-	-	-	1
College of Engineering and Computing (CEC)	\$3,535,604	22	6	10	2	40
College of Education and Human Development (CEHD)	\$1,486,349	3	2	7	2	14
College of Public Health (CPH)	\$1,730,459	1	4	9	3	17
College of Humanities and Social Science (CHSS)	\$1,500,916	10	-	1	4	15
Schar School of Policy and Government (SCHAR)	\$764,405	5	-	-	-	5
College Science (COS)	\$2,066,985	6	4	10	-	20
Total	\$13,399,699	55	18	42	27	142

^{*}Elimination of budgeted vacant positions 7/1/23 - 6/30/24

An additional \$5M in positions were eliminated by Administrative units in combination with other cost reductions and revenue enhancements to meet unit reduction targets

FY2025 Budget Capital Summary

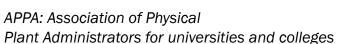
- Major capital projects primarily consist of FUSE and Life Science Engineering Building totaling \$107M
- Annual Capital and Deferred Maintenance represent on-going routine projects
- Annual Debt represents debt service (principal and interest) scheduled to be paid during FY 2025, funded from operations
- Developer Costs to be paid by P3 partner have been removed from total projected Mason capital spending
- Schedule identifies the various funding sources expected to cover FY 2025 capital project expenditures and debt service

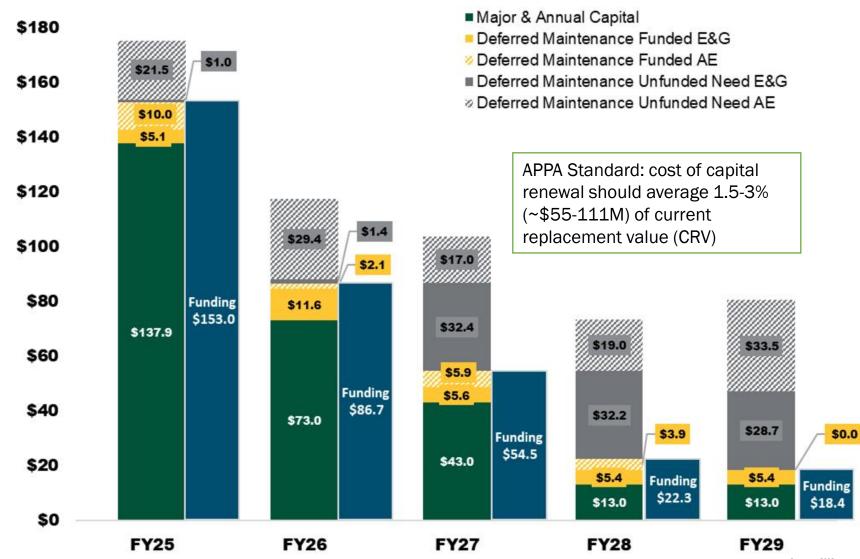
CAPITAL BUDGET		
(in millions) Expenditure		
Major Capital	131	
Annual Capital	7	
Deferred Maintenance	15	
Annual Debt Service	47	
Sub-Total	200	
Developer Cost Included Above	(22)	
Total	178	
Funding Sources		
State Appropriations Received in Current FY	61	
State Appropriations Received in Prior FY	2	
Debt	0	
Gifts	2	
Sponsored Grants	0	
Central Operations / Reserves	49	
School or Dep't Operations / Reserves	0	
Transfers in from Operating	64	
Total	178	

Capital & Deferred Maintenance Funding FY25 through FY29

CRV = \$3.7B

- Major & Annual Capital includes projects that are authorized
- FY25 and FY26 Deferred Maintenance (DM) Funded E&G includes supplemental appropriation of \$8M split between years and is based upon the biennium budget. Unfunded E&G DM projects were moved to FY27.
- Out-year Deferred Maintenance Funded AE will be adjusted as funding is allocated, anticipated spend is \$4-6M of operating and could be balanced by reserve spend
- Deferred Maintenance Unfunded Need includes currently identified projects in E&G and AE





in millions

Supporting the Governor's Agenda

- Prepare students for high demand jobs in Virginia
- Promote a vibrant, safe, and healthy campus
- Maintain affordability and reduce the cost of higher education
- ✓ Build the college and career ready pipeline in partnership with K-12 school divisions



changing our campus



Renovation

Acquisition



Development

Sustainable



Changing Our Campus



TUSE

at Mason Square

Operational planning

for new buildings



Biomedical Research Lab

TCO has made BRL operations a model for other institutions

Total Cost of Ownership (TCO)

- Capturing the total cost of an asset for better planning, operations, and maintenance
- Comprehensive cost analysis model to inform investment decision-making and planning for new buildings and operations
- More informed management of existing assets for improved efficiency

Changing Our Campus

Roofs Replaced Colgan Hall Katherine Johnson Hall





Repairs & **Replacements HVAC Systems**

6+

Asset Management

- Enhanced maintenance program extends the useful life of our assets
- Better stewardship of existing capital resources, more efficient use of Commonwealth funds
- Established Current Replacement Value reporting that helped improve the Commonwealth reporting standard
- Anticipate change will lead to increased capital funding

changing our business



Technology

People



Fenwick: Floor 1

Key:

• Wireless access point

Y Zones differentiated by varying colors

Space

Processes



Changing Our Business



Canvas

Modernizing our enterprise learning management platform



Patriot Connect

Creating an integrated student experience

Modernizing Systems

- A new learning management system will help us meet students where they are today
- An integrated student lifecycle management system will improve student experience via advising, coaching, and success

Changing Our Business



Janitorial Services



Space Optimization

Matching service with demand

Changing our business model

- Adopting new business models for enhanced services and increased efficiency that meet the changing needs of a diverse university
- Space optimization study to maximize space utilization and accommodate demand

Phone System Upgrade Mason Square, Plaza Activation Robotic Process Automation Outsourced Print & Mail Services Revised Forecasting Process Stude nt Processing proation New Cybersecurity Franciscope Classification & am Lighting Replacement Program Life Sciences & Engineering Building Construction Rede art or Accounts New prise Risk Heat Map Can Learning Management System Strategic Plan Implementation Research Administration ecurity Planning Hot Water Pipe Insulation Enhanced Performance tion ng System Enhanced Research Computing Continuity of Operations mshammer Knowledge Athletic Ticket Sales Summer Knowledge pe Satisfaction Survey Expanded Dining Services Masonvale Acquisition ent Incentive Plan En Share Series Reti ictured Parking Contract Solar Panel Installation Mason Finance (eplaceme....ace Utiliza Study ! r Renov tation **U** located **Impler** The Ovalions Expanded Supervisor Training Shude Las Rolles of Parking Contract Renegotistanding Achievement Awards Englishe Health & Well-Being Energy Efficiency & Resiliency Action Plan Expanded Professional Development New Six-Year Plan Total Cost of Ownership Model Enhanced Banner Functionality Outsourced Global Center Operations FUSE Building Construction Outsourced Housing Network DocuSign Expansion Enhanced Enterprise Risk Program Transformation Boot Camp Vernon Smith Hall Acquisition **Increased Freedom & Aquatic Center Tripartite Funding**

changing our furture



Innovation

Opportunity



Research

Achievement

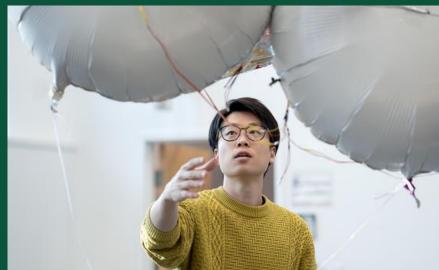


Changing Our Future



Program Launched with GO Virginia Grant





MIX
Merges Research and
Business
Unmanned Aerial Vehicles

Cutting-edge Research

 Collaborative spaces foster entrepreneurship and continue the tradition of innovation

Supporting Commonwealth
 Tech Talent goals

Changing Our Future



Refreshed Classrooms

Extend utility of existing classrooms & improve student experience



Life Sciences & Engineering

Meeting student & regional demand

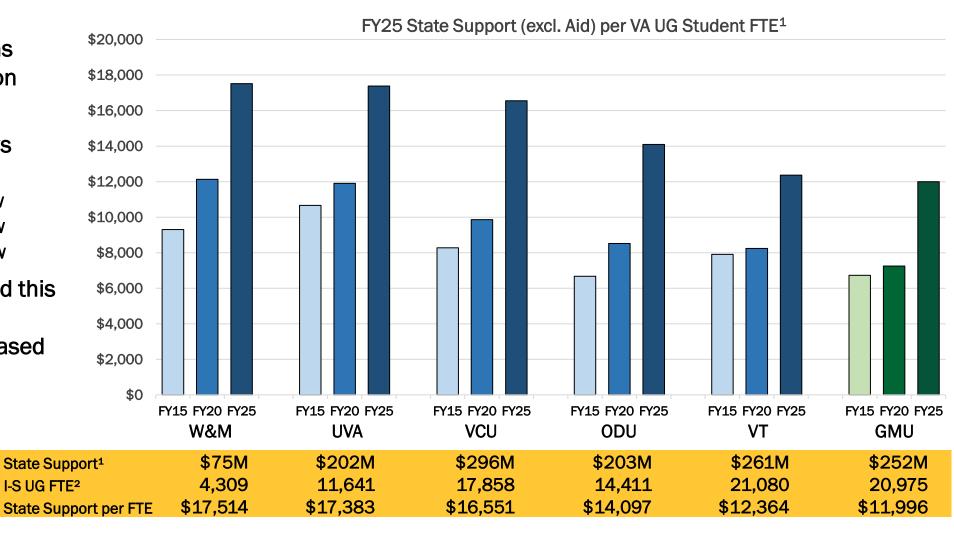
Tomorrow's Classrooms

- FUSE at Mason Square, Life Sciences & Engineering, and Interdisciplinary Sciences & Engineering buildings
- Refreshing technology in existing classrooms
- High-growth programs to meet student demand
- Producing desirable graduates that fuel the Commonwealth economy

- George Mason is leaner and more efficient than our peers with returns well above our investment
- We continue to find innovative ways to improve our efficiency and scale our systems to deliver results for the Commonwealth
- But our funding continues to lag below our true costs and our peers, while key projects and investments are delayed
- Imagine what we could achieve with equitable funding

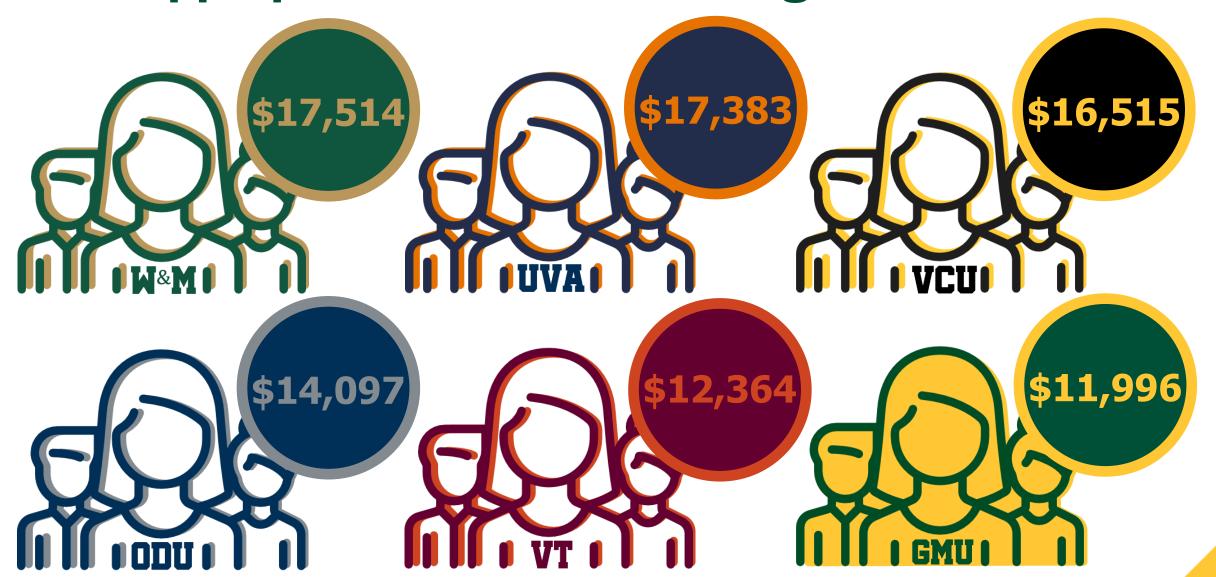
George Mason Students Get Less State Support FY25 Appropriations Per VA Undergrad Student

- Slower appropriations growth has put Mason further behind
- Mason per student vs peer median:
 - FY15: \$1,547 below
 - FY20: \$2,612 below
 - FY25: \$4,555 below
- SCHEV acknowledged this disparity and has recommended increased funding:
 - FY25: \$9.3M
 - FY26: \$18.5M



⁽¹⁾ FY25 Appropriation is based on State budget bill Chapter 2 approved on 5/13/2024, and could change as the State approves additional allocations. (2) I-S UG Student FTE is based on FY23 enrollment. The update for FY24 will be available in the Fall as per SCHEV.

George Mason Students Get Less State Support FY25 Appropriations Per VA Undergrad Student



Why Aren't George Mason Students Treated Equitably?







Generative AI – A Force for Positive Disruption

Ravi Pendse PhD



rpendse@umich.edu | \(\cap @\)ravipendse

1

AI and YOU

Have you used ChatGPT (UMGPT) or any other generative AI tools? What was your experience like?

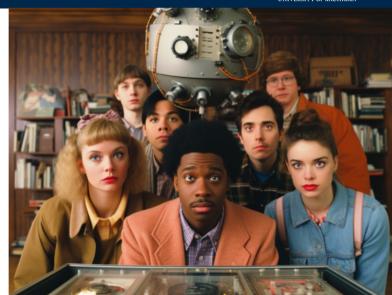


AI and YOU

OFFICE OF THE VICE PRESIDENT FOR IT & CIO UNIVERSITY OF MICHIGAN

What <u>concerns</u> you the most about AI or Generative AI?

(If anything)



3

Administrative Processes



GenAI has the potential to streamline many administrative processes. What areas on your campus could benefit from application of GenAI if any? Do you anticipate any pushback or concerns?



Workforce of the future



What curricular enhancements should we consider to prepare the workforce of the future?

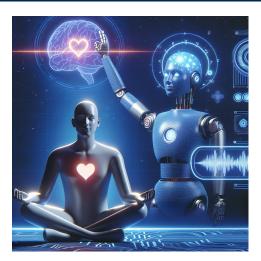


5

Al and Mental Health



Could generative AI tools be used to support mental health outcomes? Are there any concerns that we should be mindful of?



Knowledge Exchange Platform



What do you think about the possibility of building a GenAl based knowledge exchange platform? Such a platform could lead to a seamless integration between your faculty-led initiatives and all the incredible work all of you do.

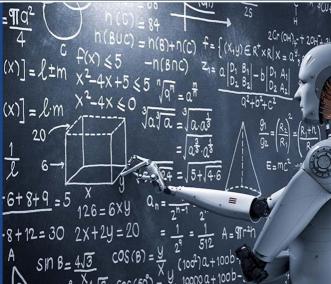


7

Al and Higher Ed



How can we ensure that the use of AI in higher education not only improves learning outcomes but also preserves the essential human elements of teaching, such as empathy, critical thinking, and ethical considerations?





9

Disruption



Al will have an enormous impact on how we teach, learn, create new knowledge, operate, and provide patient care.

According to a <u>July 2023 McKinsey report</u>, by 2030 "activities that account for up to 30 percent of hours currently worked across the US economy could be automated – a trend accelerated by generative AI."

The ability to use Natural Language to analyze data will create new opportunities.

Al Disruption



06-30-23 | THE FUTURE OF WORK

Here's how AI is already transforming DEI—and what leaders should keep in mind

Even with the aid of AI, we cannot eliminate the existence of bias.

Al chatbot beats most aspiring lawyers on national legal ethics exam, study finds

GPT-4 answered 74% of questions correctly on the Multistate Professional Responsibility Exam, compared to the estimated 68% for humans

Generative A.I.'s Biggest Impact Will Be in Banking and Tech, Report Says

For some companies, the new technology is an opportunity to enhance productivity and profit. Will their workers benefit as well?

Is it right to use AI to identify children at risk of harm?

Machine learning is being used to help protect children, but it raises ethical questions

11

Al Disruption



Al chatbot outperforms human doctors in responding to patient questions

BY JULIA MUELLER - 05/01/23 4:00 PM ET

Al Now Diagnoses Disease Better Than Your Doctor, Study Finds

Peer-reviewed study says you'll soon consult Dr. Bot for a second opinion



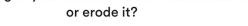
The first fully A.I.-generated drug enters clinical trials in human patients

PUBLISHED THU, JUN 29 2023-2:45 PM EDT I UPDATED THU, JUN 29 2023-3:51 PM EDT

Hayden Field SHARE f in



Al is coming to your dentist's office. Will it build trust,





FDA has now cleared 700 AI healthcare algorithms, more than 76% in radiology

Al Disruption



WHO unveils a digital health promoter harnessing generative AI for public health

Al & ML Intelligence Global Edition

Al and public health – a major opportunity

"The intersection of public health and artificial intelligence represents a transformation in healthcare," says one epidemiologist, who sees the chance to greatly improve disease prevention and management, and promote health and wellness.

College of Public Health receives NIH grant to pilot AI chatbot for African Americans with depression

July 8, 2024 / By Mary Cunningham

13

Al Disruption



OPINION | COMMENTARY

AI Can Do as Bad a Job as Your PR Department

Sports Illustrated Published Articles by Fake, AI-Generated Writers

We asked them about it – and they deleted everything.

News releases these days are full of meaningless nothingisms, which a robot could easily produce.

A.I. Art Experts Dismiss Fears That the Technology Will Destroy Humanity. But It Could Make Culture Really Boring

NEWS > SMART & CONNECTED LIFE

Your Next Lawyer Could be Powered by Al—Here's Why That's a Good Thing

Legal eagles now come in the form of robots

By <u>Sascha Brodsky</u> - Published on January 25, 2023 08:52AM EST

Al Disruption



BUSINESS SEP 15, 2023 7:00 AM

Teachers Are Going All In on Generative Al

Surveys suggest teachers use generative Al more than students, to create lesson plans or more interesting word problems. Educators say it can save valuable time but must be used carefully.

> Gartner Says More Than 50% of Software **Engineering Leader Roles Will Explicitly** Require Oversight of Generative AI by 2025

Is ChatGPT a Liar?

Survey looks at library professionals' attitudes toward the Al-powered chatbot

Artificial Intelligence Is Changing the Way Cars Are Made

15

Disruption - Libraries



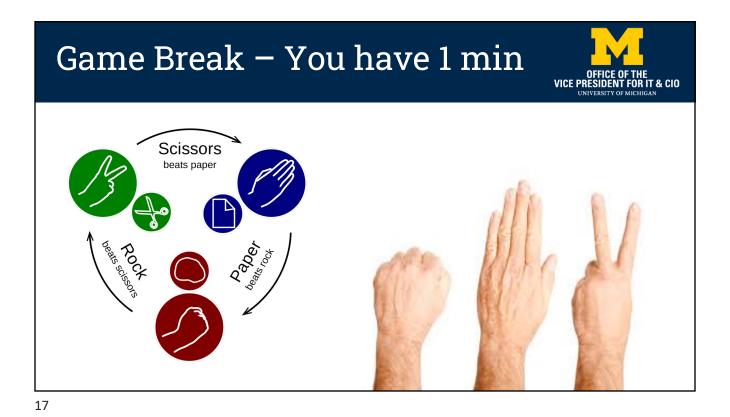
Rise of AI marks new chapter for university librarians

From fax machines to dawn of the internet, librarians are used to facing 'existential crises' and many are embracing the challenge of ChatGPT head on

> Librarians Can Play a Key Role Implementing Artificial Intelligence in Schools

Is ChatGPT a Liar?

Survey looks at library professionals' attitudes toward the Al-powered chatbot



What happened in that 1 min?















- 250 million emails sent
- 750,000 tracks streamed on Spotify
- 2.9 million Instagram posts liked
- 350,000 tweets posted
- 500 hours of YouTube videos uploaded
- 4 million Facebook posts liked
- 510,000 comments posted on FB
- 6.3 million+ Google searches
- 9,500 connections made in LinkedIn

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What happened in that 1 min?







- ChatGPT received 6,900 queries
- 23,000 Al-generated images were created
- 3 people had their identity stolen
- 20 new pieces of malware were created
- 20 websites were hacked
- 5 ransomware attacks occured

19

19

Higher Education



Generative AI – our approach at the University of Michigan



Our Vision



"Generative AI (GenAI) is disrupting all aspects of society, from teaching and learning to art and design to engineering innovation."

Generative Artificial Intelligence Committee Report

Our collective vision is to provide "just in time" generative AI tools to support and augment the innovative work our U-M community does each day.



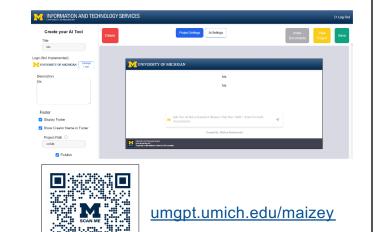
21

U-M GPT Provided at no cost. Interactions with U-M GPT will remain confidential in line with privacy notice and IA and U-M policies. Fully accessible and works with assistive technology.





- Build your own version of U-M GPT that is trained on a custom dataset & shared with specific audiences
- Supports data from:
 - o Google Drive
 - o Public websites
 - Lecture Capture
 - o Canvas
 - Dropbox
- Monthly billing based on usage currently free to use.
- Point & click no coding required!



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U-M GPT Toolkit

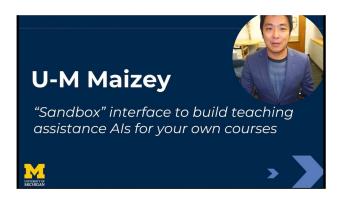


- Advanced AI practitioners are able to utilize ITS infrastructure to build, train, and host their models in a secure and scalable platform.
- Provides ready access to compute with predefined spending safeguards



U-M Al Use Case: Class Tutors





U-M Ross School of Business faculty members built a 24/7 AI tutor for their courses, informed by past course data, which is currently serving more than 1,000 students.

25

U-M AI Use Case: Student Advisors



LSA Maizey AI Advising

Welcome to our new artificial intelligence (AI) "chatbot" - LSA Maizey AI Advising. LSA Maizey is like having a 24/7 smart sidekick for college life. Need quick info about requirements, campus events, or study tips? It's got you covered anytime, day or night. This pilot program was designed to provide broad supplemental academic advising support and resources for LSA students. Newnan advisors can support you in adapting general information to your specific situation.

The U-M College of Literature, Science, and the Arts (LSA) used U-M Maizey to create LSA Maizey Al Advising, a 24/7 Al chatbot they call a "smart sidekick for college life."

U-M AI Use Case: Resume Review





ITS Administration used Maizey to create an Alpowered resume tool to allow them to rank and compare hundreds of resumes at a time.

27

U-M Al Use Case: Tech Help Call Summaries





The U-M Service Center is using GenAl to write instant summaries of calls to their Tech Help line, saving hundreds of hours of employee time each month.

U-M AI Use Case: Student Club Finder





ITS built a chatbot for U-M's Student Life organization to help students more easily (and accurately) explore the more than 1,500 student organizations at the university.

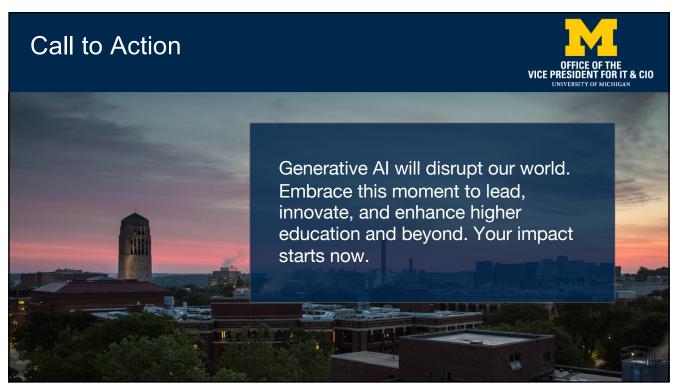
29

U-M AI Use Case: Book Recommendations





The U-M Library launched a project to use U-M Maizey AI to create a natural-language book recommendation service.





Al Across Mason Nation

Amarda Shehu, PhD

Associate Vice President of Research for the Institute for Digital InnovAtion (IDIA)

Associate Dean for AI Innovation, Professor of Computer Science

College of Engineering and Computing

July 25th, 2024



Al Across Mason Nation

Research

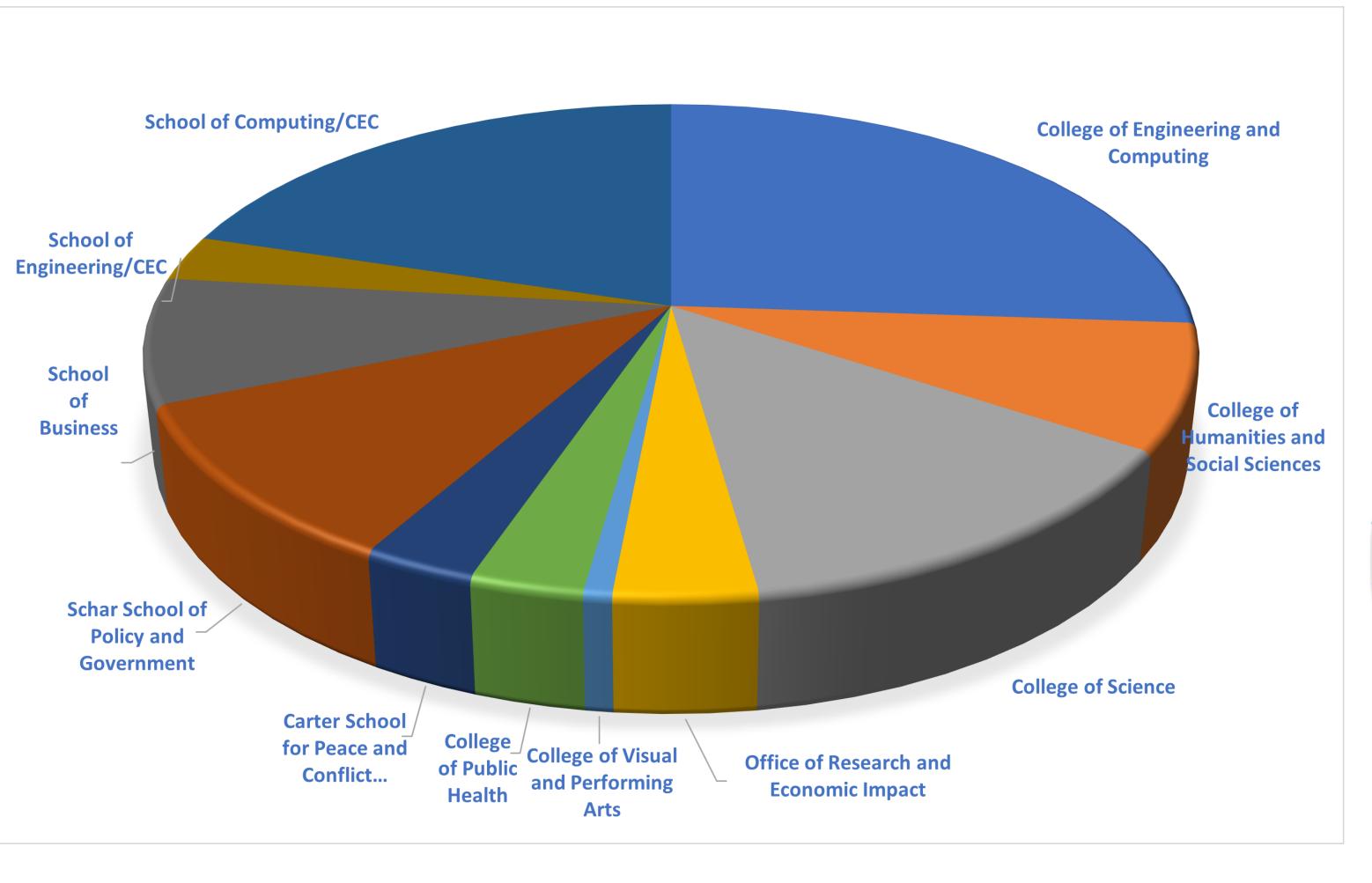
Education

Workforce Development

Partnerships – Community Engagement



Al Across Mason Nation



Mason faculty expertise and interests around AI&ML



Al Ethics, Safety, and Policy Across CEC, Schar, CHSS: Philosophy, Public Policy, Computer Science

Learning Across CEC, COS:
Computer Science, Statistics,
Computational Data Sciences

Robotics and Autonomous

Foundational AI and Machine

Across CEC, CPH, COS: Health Administration and Policy, Bioengineering, Computer Science

Al in Education Across CEHD, CEC:

Health Informatics and Biomedical Al

Learning Technologies, Computer Science

Quantum Computing,
Science, and Engineering for
Al Across COS and CEC:
Mathematics, Electrical and
Computer Engineering,
Computer Science, Physics,
Mechanical Engineering

Systems
Across CEC, CHSS: Mechanical

Engineering, Electrical and Computer Engineering,

Computer Science,
Cybersecurity Engineering,

Information Sciences and

Technology, Psychology

Civic Technologies Across CEC,

CHSS: Information Sciences and

Technology, Computer Science, Psychology, Statistics

Al Economics & Business Innovation Across CHSS, CCB, CEC, Schar

Environmental and Geospatial Al Across COS, CEC: Geography and Geoinformation Science, Environmental Science, Civil Engineering, Computer Science

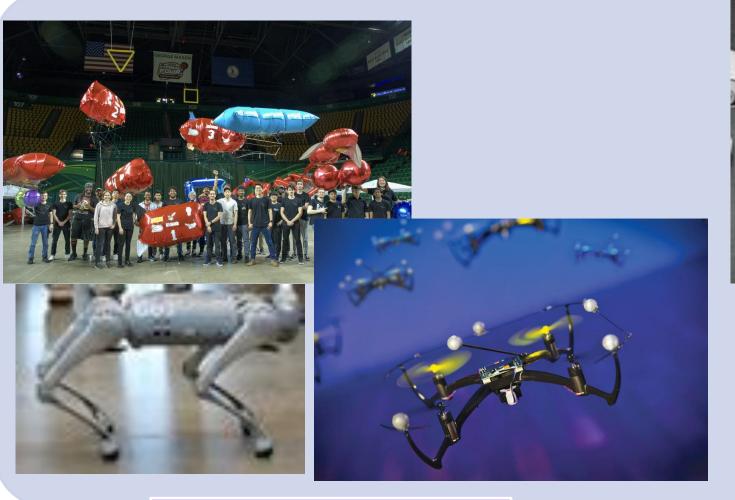
Al and Infrastructure Security
CEC: Cyber Security Engineering,
Computer Science, Information
Sciences and Technology

Language Technologies Across CEC, CEHD, and CHSS: Computer Science, Information Sciences and Technologies, Linguistics, English, Learning Technologies, Philosophy

Al-Enabled Digital Twinning Across CEC, COS: Computer Science, Civil Engineering, Mathematics



Deepening Verticals









Al in embodied systems

Robotics Computer Vision

Al in embedded systems and systems of systems

Cyberphysical Computing

Systems Engineering

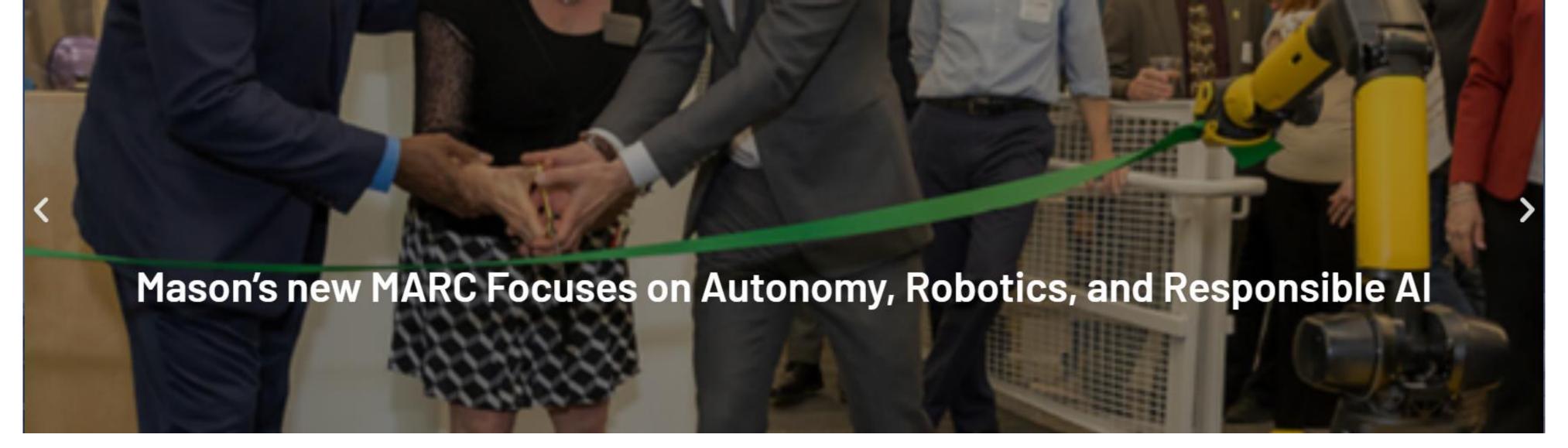
AI-enabled Virtual, Augmented, and Mixed Reality

Immersive Computing **Foundation** Models

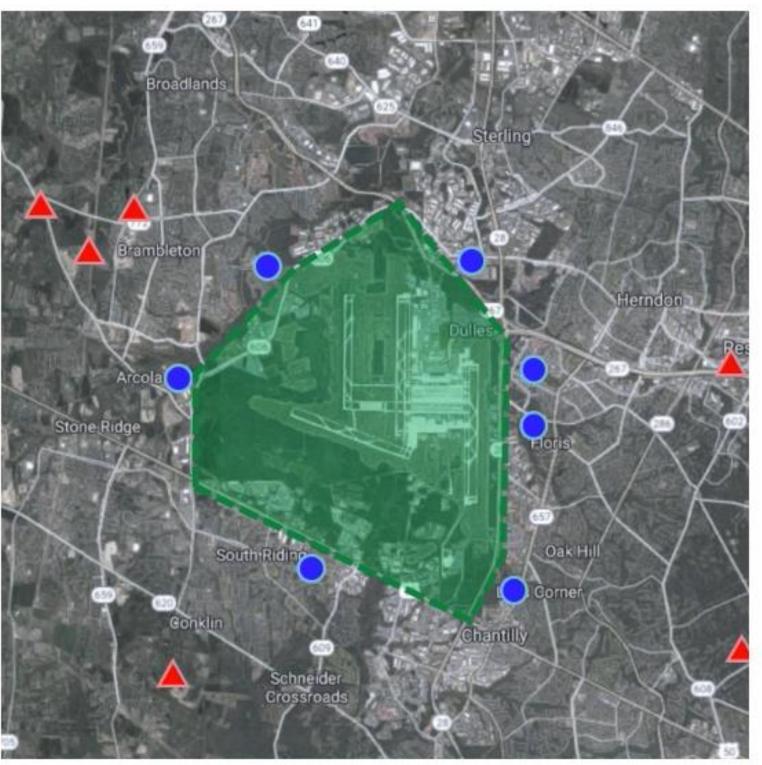
Large Language Models

Knowledge Acquisition Reasoning

Al For Health, Science, Education, Business, Engineering, ...









Distributed Group Control

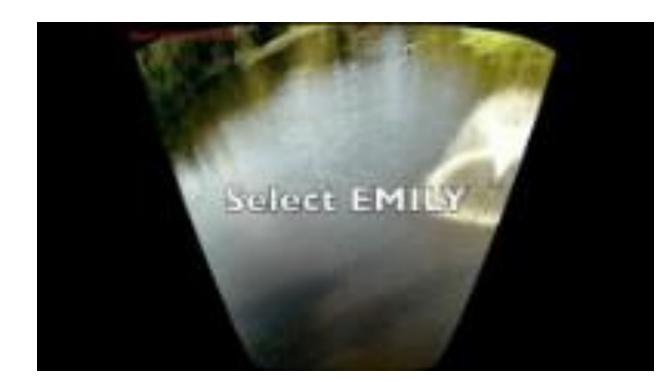
Multi-agent Differential Games

Robot Design & Control

Snake Robots



Unmanned Aerial & Surface Vehicles



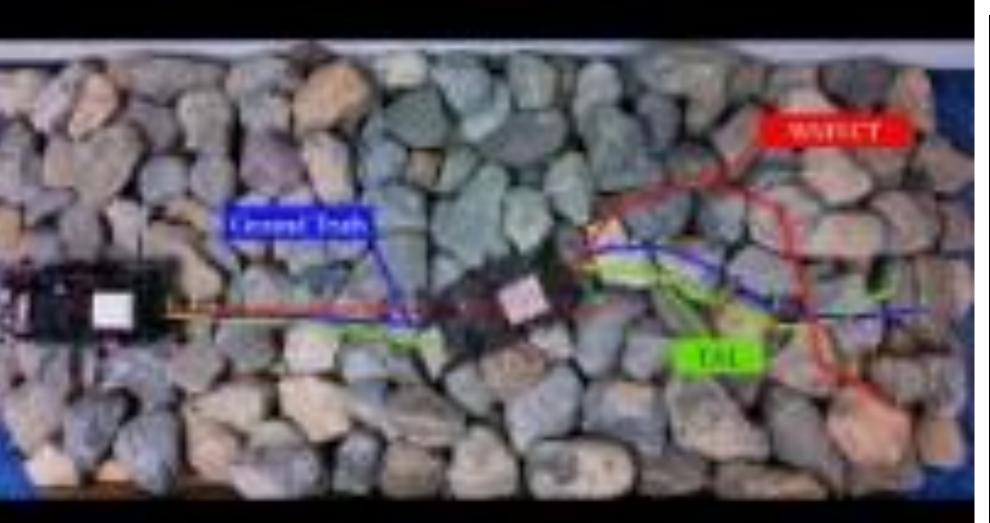
Tethered Aerial Vehicle





Vertically Challenging Terrain







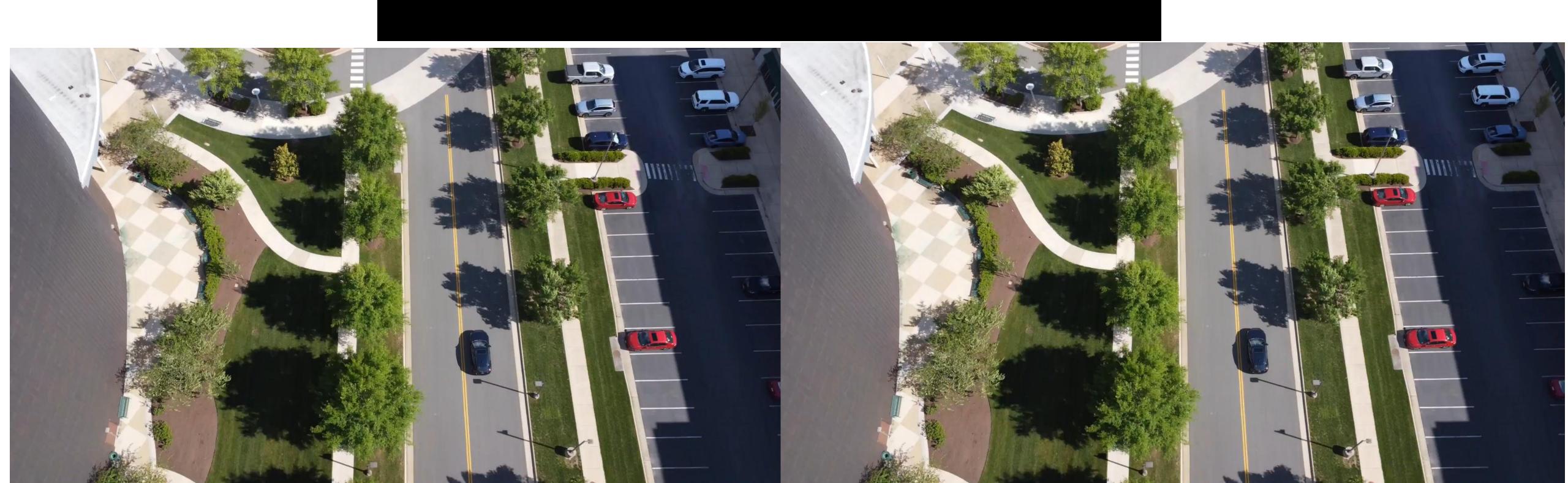
High-speed off-road ground vehicle







Zoran Duric Innovation Lab Fuse, Mason Square



STUDENT LIFE

ACADEMICS

ADMISSIONS & AID

RESEARCH

ABOUT

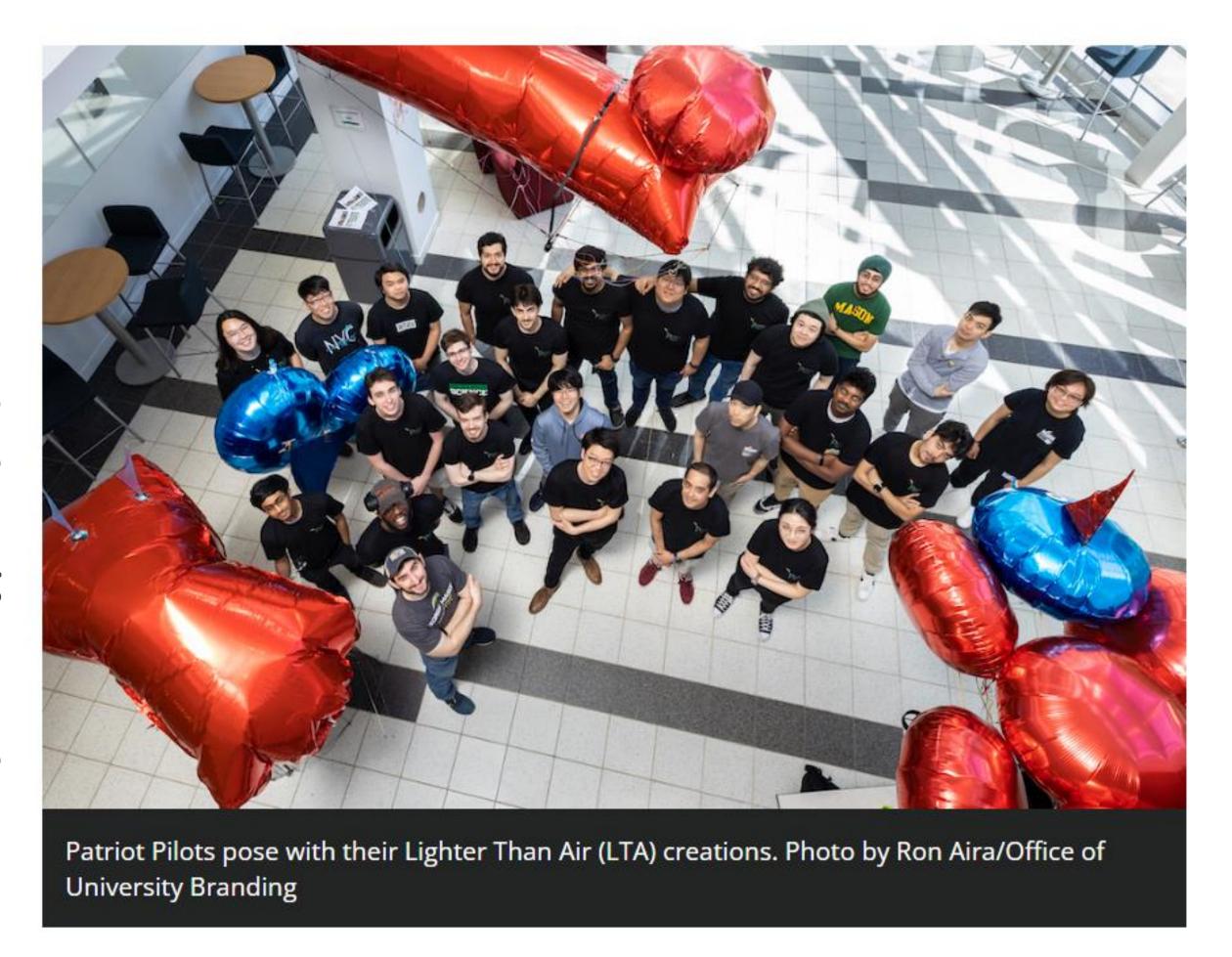
George Mason University wins Defend the Republic

May 22, 2023 / By Rena Malai

In This Story

Cameron Nowzari Ningshi Yao Daigo Shishika

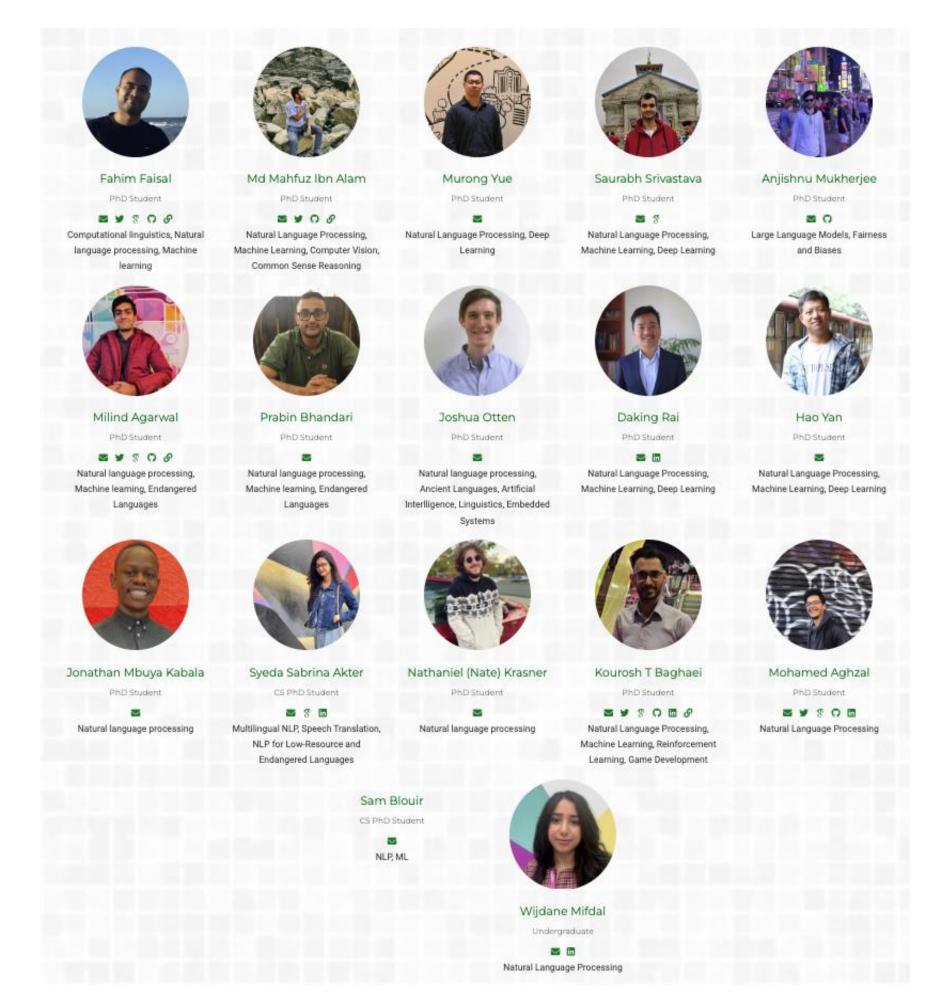
Twice a year, university teams compete in the Lighter Than Air (LTA) Defend the Republic competition. In April, George Mason University hosted the competition in EagleBank Arena and won. The winning Mason team, Patriot Pilots, led by principal investigators Cameron Nowzari, Ningshi Yao, and Daigo Shishika, all from the College of Engineering and Computing, competed against six universities and about 50 LTA robotic agents, aka blimps.

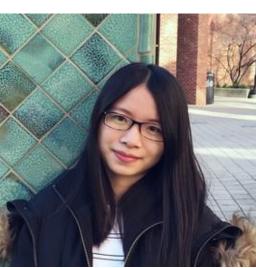




LLMs & Foundation Models @ Mason

Large Language Models for Question Answering, Multilingual NLP, Dialects, Text Simplification, Hate Speech, Human-Al Interaction, Clinical NLP, Language of Life, Biomedical Foundation Models, etc.





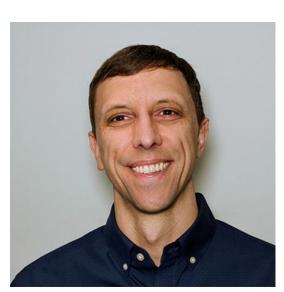
Ziyu Yao



Antonios Anastasopolous



Marcos Zampieri



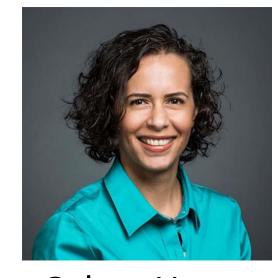
Kevin Lybarber

Computer Science

Information Sciences and Technology



Geraldine Walther Linguistics



Ozlem Uzuner
Information Sciences
and Technology



Amarda Shehu

Computer Science

LLM Agent: Build Your Own GenAl Assistant using Gentopia

Gentopia.AI (S): A Collaborative Platform for Tool-Augmented LLMs

Binfeng Xu, Xukun Liu, Hua Shen, Zeyu Han, Yuhan Li, Murong Yue, Zhiyuan Peng, Yuchen Liu, Ziyu Yao, Dongkuan Xu
https://github.com/Gentopia-AI

(Published at EMNLP 2023)









Gentopia in Assignment Showcase from CS678, Advanced NLP (Spring 2024)

User: Recommend jobs for me based on my resume CV_ZiyuYao.pdf
jobfinder:

Response of jobfinder:

{"name":"local_pdf_reader", "arguments":{ "pathToPDF": "CV_ZiyuYao.pdf" }}

Function Response of local_pdf_reader:

Ziyu Yao

Öziyuyao.org Bziyuyao@gmu.edu ZiyuYao GScholarDepartment of Computer Science
George Mason University
Nguyen Engineering Building 4415
Fairfax, VA 22030 USA
(Last update: April 14, 2024)
Research Interests
I am interested in broad Natural Language Processing and Artificial Intelligence
problems, particularly building natural language interfaces (e.g., question-answering

S. Singh: Job
Finder Agent
(input a resume,
return suitable
jobs from hiring
website)

Based on your resume, here are some job recommendations for you:

1 Process Engineering Internship at GTI Energy's Research & Engineering Group. This role involves evaluating low carbon impact technologies including natural gas, biomass, and CO2 upgrading and conversion processes.

2 Project Origination Associate, Nature Based Solutions (NBS). This role requires knowledge of nature-based carbon standards, technologies, and project development processes.

3 Dealer Management System Business Process Analyst at Dominion Dealer Solutions. This role involves applying analytic skills to contribute to the growth of a new cloud-based DMS.

4 Process Improvement Specialist. This role involves leading the execution of the 90-Day improvement plan to deliver the glidepath through problem-solving and change management.

5 Junior Payroll and Processing Specialist. This role is for an experienced, passionate pioneer in human resources who wants a daily collaborative environment.

Please note that these are just suggestions and you should apply to the ones that best fit your career goals and interests.

P. Jorshi: Calendar Summarizer (give access to Google Calender, return summary of upcoming events)

Description: Google Calendar Agent that fetches the next 10 e Prompt: summarize my google calendar events Response:
Here is a summary of your Google Calendar events:
1 March 11, 2024 - SWE 621 at 12:00 PM
2 March 11, 2024 - CS 678 at 7:20 PM
3 March 12, 2024 - SWE 205 TA at 10:30 AM
4 March 13, 2024 - SWE 621 at 12:00 PM
5 March 14, 2024 - SWE 205 TA at 10:30 AM
6 March 15, 2024 - SWE 205 Grading at 11:30 AM
7 March 18, 2024 - SWE 621 at 12:00 PM
8 March 18, 2024 - CS 678 at 7:20 PM
9 March 19, 2024 - SWE 205 TA at 10:30 AM
10 March 20, 2024 - SWE 621 at 12:00 PM

User: can you summarize video https://www.youtube.com/watch?v=amJn98FnbVE
yt:

Response of yt:

{"name":"youtube_transcript", "arguments":{"query":"amJn98FnbVE"}}

Function Response of youtube_transcript:

[音楽] バレー 好き別になんとなくやってるじゃあさお前 の学校強い最近は強いと思う よ次は悔しかったとか楽しかったとか別に 以外のごと言わせるからなじゃあ期待しとくよし陽はいつも新しい ね商陽と練習じゃない試合やってみたいか もって負けたら即ゲームオーバーの 試合 やろうもう1回がない 試合 もう1回がない試合だ [音楽] [拍手] け劇場版配球ゴミ捨て場の 決戦 JA

yt:

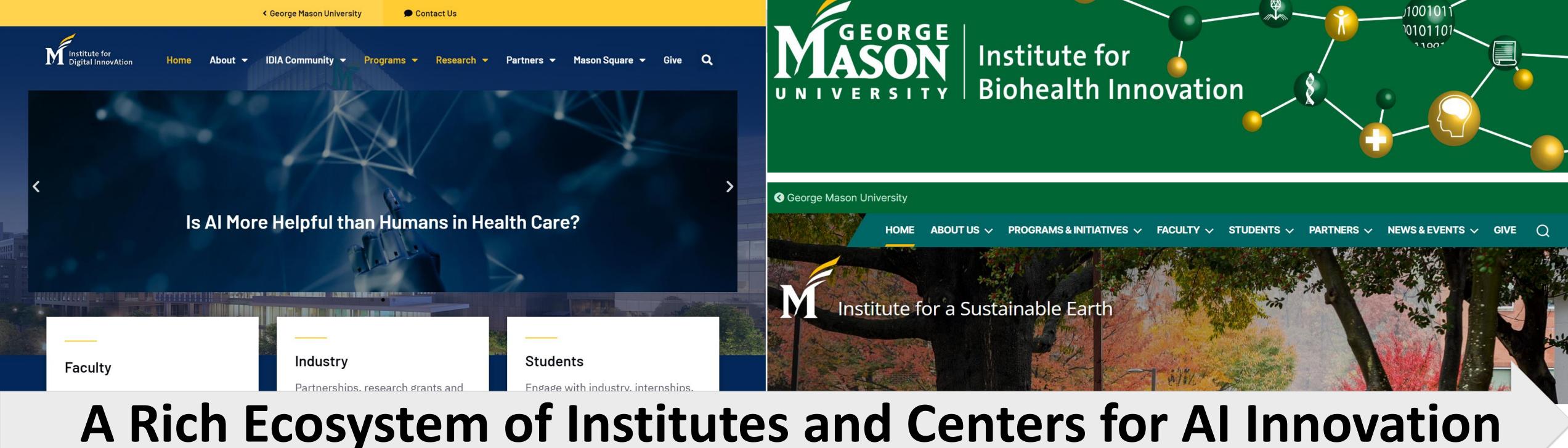
Response of yt:

Response of yt:

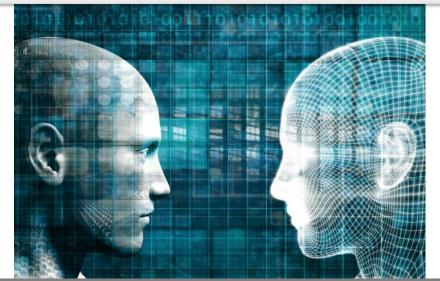
The video is about volleyball. It mentions that the speaker thinks their school is strong in volleyball. They talk about feeling frustrated or having fun, and they mention that they want to try playing in matches rather than just practicing. The video also mentions a decisive battle in the garbage dump.

P. Mukherjee: YouTube Summarizer (input a link to YouTube video, return a text summary)

[(gentenv) ziyuyao@Ziyus-MacBook-Air GentPool % ./clone_agent vanilla_template vanilla-demo-agent Cloning agent vanilla_template to vanilla-demo-agent, continue? (y/n)
y Agent vanilla-demo-agent has been cloned from vanilla_template. [(gentenv) ziyuyao@Ziyus-MacBook-Air GentPool % python assemble.py vanilla-demo-agent
Welcome to Gentopia!
User: Hi! Could you introduce George Mason University to me? vanilla-demo-agent:
George Mason University, often referred to as GMU, is a public research university located in Fairfax, Virginia. It was originally founded in 1949 as a branch of the University of Virginia, and became an independent institution in 1972. The university is named after George Mason, a statesman and one of the founding fathers of the United States.
GMU offers a wide range of programs and degrees through its several colleges and schools, including the College of Humanities and Social Sciences, the Volgenau School of Engineering, the College of Science, the School of Business, and the Antonin Scalia Law School, among others.
The university is known for its strong programs in economics, law, creative writing, computer science, and business. It is classified among "R1: Doctoral Universities - Very high research activity".
George Mason University is also recognized for its commitment to diversity, with a student body that represents a wide range of cultural and ethnic backgrounds. The university's campus features modern facilities, including research centers, libraries, and student housing. It also has a vibrant student life with numerous clubs, organizations, and sports teams.
In addition to its main campus in Fairfax, GMU also operates campus in Arlington and Prince William County in Virginia, and an international campus in Songdo, South Korea.
User: ^C Bye! (gentenv) ziyuyao@Ziyus-MacBook-Air GentPool % [



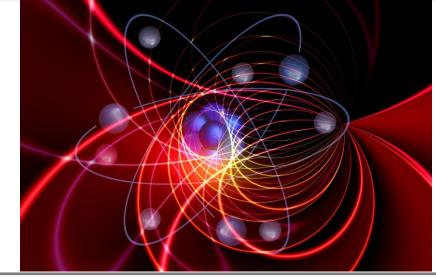
A Rich Ecosystem of Institutes and Centers for Al Innovation



Center for Advancing Human-Machine Partnerships (CAHMP)



Criminal Investigations and **Network Analysis Center (CINA)**



Quantum Science and Engineering Center (QSEC)



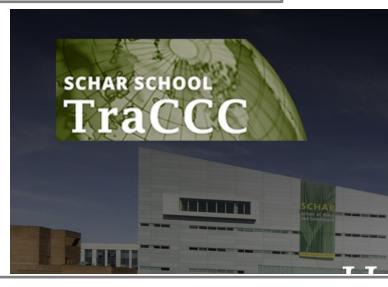
C4I and Cyber Center



Virginia Climate Center



Center for Secure Information Systems



The Terrorism, Transnational Crime and Corruption Center (TraCCC)



Center for Assurance Research and Engineering (CARE)

Deliberate about Building Al-adjacent Interdisciplinary Communities to take on

Complex Societal
Problems of our Time

What Makes Us "Human" in the Digital Age? A CHR & IDIA Joint Symposium

Friday, October 20, 2023 1:00 PM to 5:00 PM EDT Horizon Hall 2014



Register for the symposium

The **Center for Humanities Research** (CHR) is partnering with the **Institute for Digital InnovAtion** (IDIA) to bring faculty from across George Mason University to engage on some of the thorniest, transdisciplinary problems of our times that must be addressed both humanistically and technologically.

This CHR-IDIA partnership launches in October 2023 with a symposium that will feature two panel discussions, each of which brings together faculty members from the humanities, computing, and engineering to debate consequential questions. Together, panelists, moderators and attendees will take up fundamental questions about the status of both "the human" as a concept, and actual humans, in the digital age.

Where does the human end and the computer begin? Or might we more accurately theorize a human-machine continuum? Is "the human" an outmoded or necessary category? How are culturally informed categories that constitute the human--like gender, sexuality and race--at stake in human-technology relationships? And finally, what role does language, in its various iterations, play in constituting both the human and the machine? By taking up these questions, this symposium engages directly with the CHR's annual theme for AY 2023-4, "Democracy, Disposability, Repair." Two panel discussions around this theme will be the first in what we hope will be a series of CHR/IDIA discussions and events.



Deliberate about Incentivizing Interdisciplinary Communities to take on Complex Societal Problems of our Time

Scaling Faculty R&D to Faculty-Industry Partnerships



Jonathan Auerbach, an assistant professor in the Department of Statistics, is working on the project "A Scientific Framework for Evaluating America's Data Infrastructure" with a number of partners. His research focuses on a scientific framework for evaluating the health of data infrastructure.



For the project
"Organizing an
Efficient and Inclusive
Digital Economy: The
Roles of Recent
Technological
Breakthroughs in
Verifiable
Computation," Jiasun
Li, associate professor
in the Costello
College of Business, is
partnering with
Protocol Labs.



Emanuela Marasco, an assistant professor in Mason's Department of **Information Sciences** and Technology, is partnering with Karl Ricanek, founder of **Lapetus Solutions** Inc. on the project "Video-based, Secure, Accurate and **Usable Contactless** Fingerprint Authentication in Smartphones."



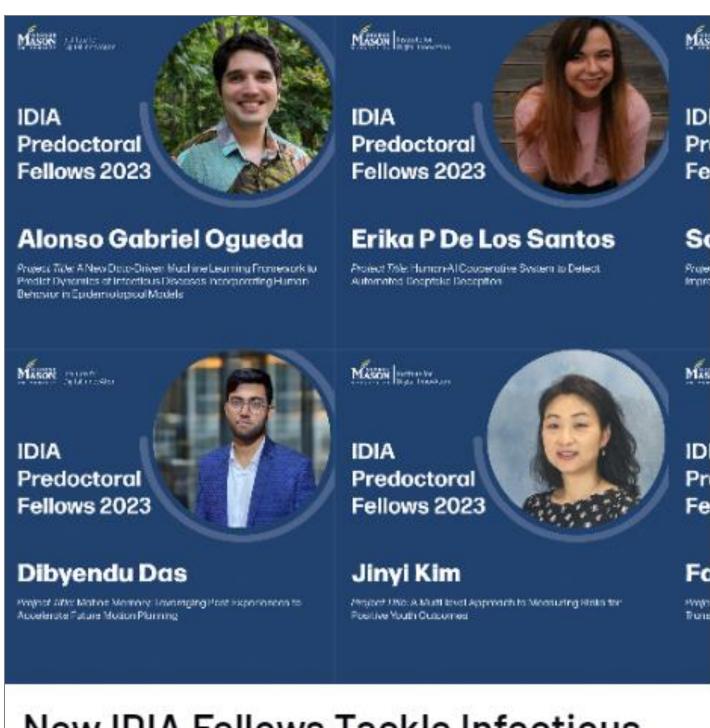
Parth Pathak, an associate professor in Mason's Department of Computer Science, is working with AT&T Labs on "Predicting RF Exposure in Today's Ultra-dense Wireless Networks" to develop a novel framework for Radio Frequency (RF) exposure prediction embedding environment information and deep learning.



Kun Sun, a professor in the Department of Information Sciences and Technology, is working with Yan Zhai, senior director of cybersecurity at Visa Inc. on the project "Referencebased Automatic Program Repair." Sun's research aims to improve the quality, security, and reliability of software systems.



Craig Yu, an associate professor in Mason's Department of Computer Science and director of the **Design Computing** and Extended Reality (DCXR) lab at Mason Square, is working with partners on "Advancing Human-Machine and Human-Human Collaborations via **Networked Extended** Reality Innovations."



New IDIA Fellows Tackle Infectious Diseases, Robotics and Deepfakes

Improving Human-Machine Collaborations with Heterogeneous Multiagent Systems



Dr. Elizabeth Phillips, Department of Psychology, Human Factors and Applied Cognition Group, College of Humanities and Social Sciences, George Mason University Deliberate about Incentivizing Interdisciplinary Communities to take on Complex Societal Problems of our Time

Scaling Faculty I



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"Organizing an
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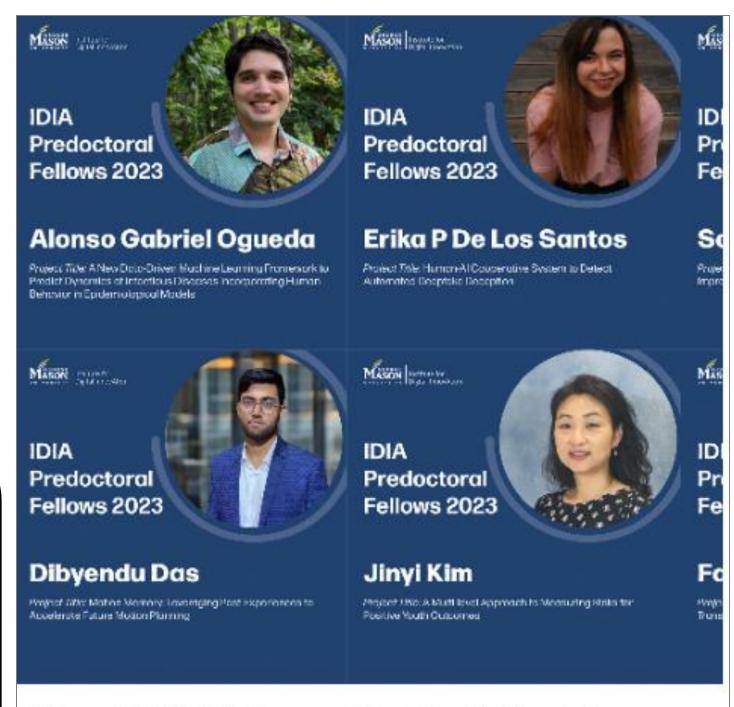
Jiasun Li (CCB)

NSF CAREER Award "Securing Offpremise Digital Services in the Presence of Strategic Incentives"

Emanuela Marasco, Parth Pathak, an an assistant professor associate professor in in Mason's Mason's Department of Computer Science, is Department of working with AT&T Labs **Information Sciences** on "Predicting RF and Technology, is partnering with Karl Exposure in Today's Ricanek, founder of **Ultra-dense Wireless Lapetus Solutions** Networks" to develop a Inc. on the project novel framework for Radio Frequency (RF) "Video-based, Secure, Accurate and exposure prediction **Usable Contactless** embedding environment Fingerprint information and deep Authentication in learning. Smartphones."

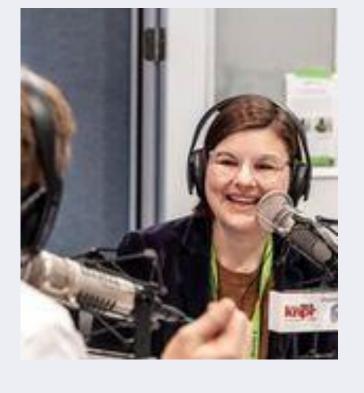
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Dr. Elizabeth Phillips, Department of Psychology, Human Factors and Applied Cognition Group, College of Humanities and Social Sciences, George Mason University Deliberate about Incentivizing Interdisciplinary Communities to take on Complex Societal Problems of our Time

Elizabeth Phillips (CHSS)

- 1. Air Force Office of Scientific Research, Trust and Influence Program Award "Moral Justification to Foster Human-Machine Trust"
- 2. Air Force Office of Scientific Research, Trust and Influence Program Award "Developing a Quantification System for Robot Moral Agency"

for Evaluating the health of data infrastructure.

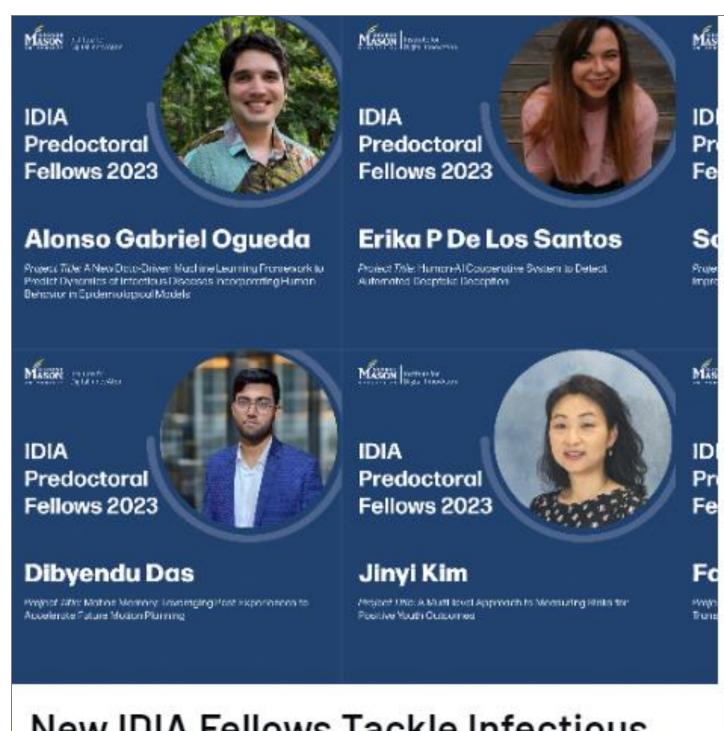
Verifiable
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Ultra-dense Wireless
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novel framework for
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exposure prediction
embedding environment
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Sun's research aims to improve the quality, security, and reliability of software systems.

(DCXR) lab at Mason
Square, is working
with partners on
"Advancing HumanMachine and HumanHuman
Collaborations via
Networked Extended
Reality Innovations."



New IDIA Fellows Tackle Infectious Diseases, Robotics and Deepfakes

Improving Human-Machine Collaborations with Heterogeneous Multiagent Systems



Dr. Elizabeth Phillips, Department of Psychology, Human Factors and Applied Cognition Group, College of Humanities and Social Sciences, George Mason University



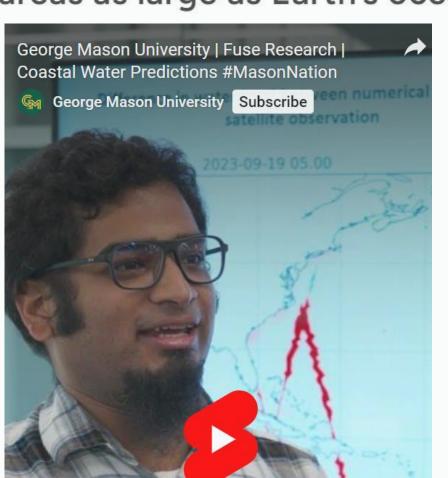
Rich Al Research Landscape



How Machine
Learning
Improvements are
Helping to Fight
Human Trafficking

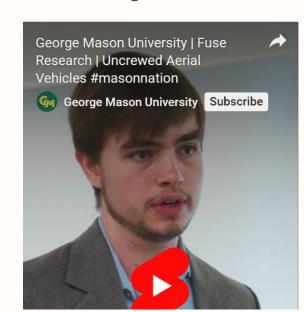
Satellites aren't just for pinging cell service across the globe: They're also a critical resource for observing areas as large as Earth's oceans.

Soelem Aafnan Bhuiyan, PhD student in <u>civil</u>
<u>engineering</u> at George Mason University, is
working with College of Engineering and
Computing professor <u>Viviana Maggioni</u> to improve
coastal water level predictions with satellite
observations in the hopes of better predicting
storm surges amidst rising sea levels. We spoke
with Bhuiyan about his research and his personal
connection to the impacts of rising sea levels.



With today's use and demand for all-access video, Uncrewed Aerial Vehicles (UAVs), drones, are commonplace in everything from defense contracting to filming backyard barbeques.

While useful technology, UAVs can pose a serious security risk. George Mason University systems engineering and operations research undergraduates Dyar Aziz and Markus Garretson are working with professor Ali Raz to develop a methodology for inferring UAV intent based on sensor data.



A team of George Mason University researchers, led by Distinguished University Professor J.P. Singh, has received a \$1.4 million grant from the Department of Defense to examine the way countries are implementing their national artificial intelligence infrastructure strategies.

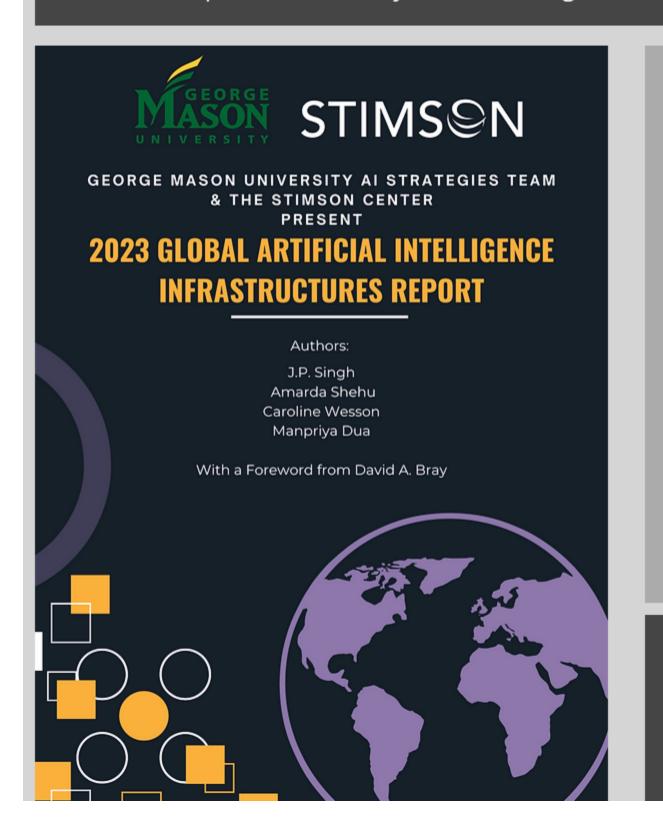




Dissecting & Predicting National Al Infrastructures with Al: Al4Policy & Policy4Al

2023 Global Al Infrastructures Report

A report authored by the Al Strategies team with a foreword from the Stimson Center's David Bray



About

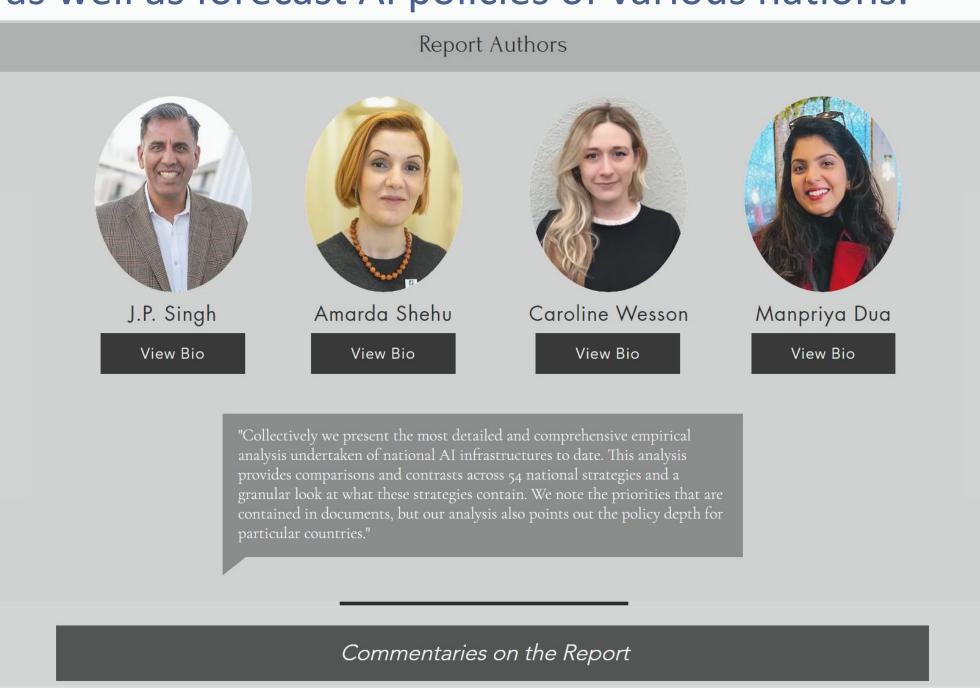
The 2023 Global Al Infrastructures Report uses computer science techniques to analyze national and sub-national Al policies published by 54 different countries. It's the most comprehensive analysis to date on national Al policies. It provides important comparisons and contrasts of national and global priorities for the development and deployment of Al. The report analyzes the empirical determinants of dominant strategies for developing AI around the globe and shows where countries are converging and diverging in their approaches to Al. The cross-national and global comparisons are important for a host of important players in Al including policy-makers, governments, businesses, and civil society organizations,

Download the report here:

DOWNLOAD

aistrategies.info – Department of Defense Minerva Award (2022-2025) to JP Singh, Amarda Shehu, Antonios Anastasopolous, Jesse Kirkpatrick, Michael Hunziker

Funded by a Department of Defense Award under the MINERVA program, a team of Mason researchers and their students are pivoting AI4AI that is, AI text mining techniques to automatically analyze corpora of reports on AI infrastructure policy to elucidate challenges, values, current policy, as well as forecast AI policies of various nations.





Digital Twinning: From Optimization

Studying optimization for neuromorphic imaging and digital twins

Apr 19, 2024

Elizabeth Grisham

Harbir Antil (PI), director of the Center for Mathematics and Artificial Intelligence (CMAI), professor of Mathematical Sciences, and Rainald Löhner (co-PI), director of Computational Fluid Dynamics Lab, professor of Physics and Astronomy, received funding from the Air Force Office of Scientific Research (AFOSR), under the prestigious DURIP program, to establish a neuromorphic imaging and digital twins lab with capabilities to design new optimization algorithms.

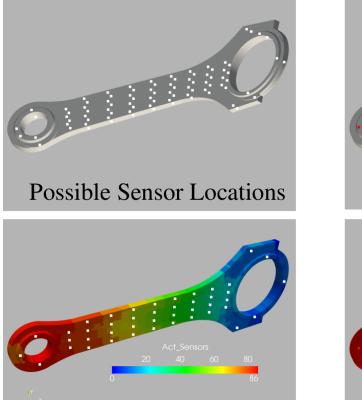
This project will setup the Neuromorphic Imaging and Digital Twins Lab—a first of its kind physical lab in the country under the Center for Mathematics and Artificial Intelligence (CMAI) at George Mason University. This lab will contain equipment for

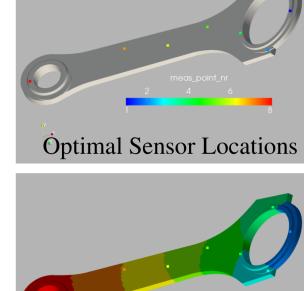
(L-R) Habir Antil and Rainald Löhner

neuromorphic imaging, neuromorphic computing, and digital twins that will not only support research at Mason but support the needs of local organizations and beyond.

Facundo Aiurado
IDIA Predoctoral
Fellow

Connecting Rod

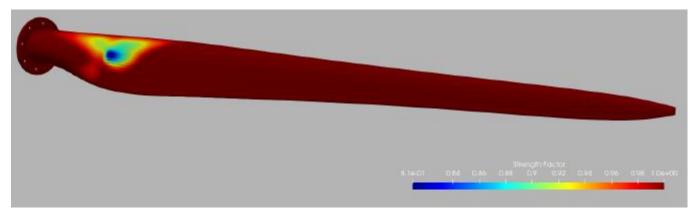




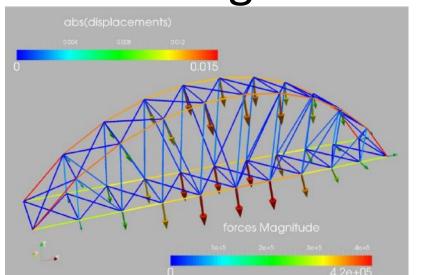
`Zones of Influence'

Siemens Blade

Number of Sensors Activated

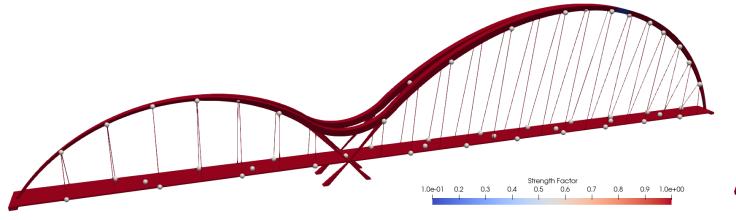


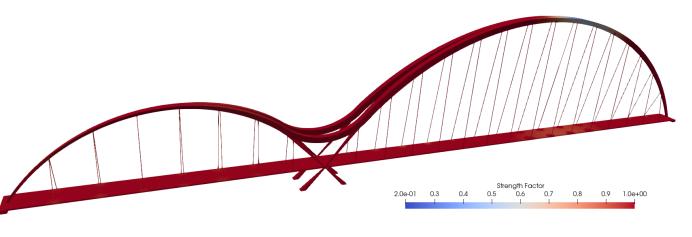
Bridge



Infinity Bridge









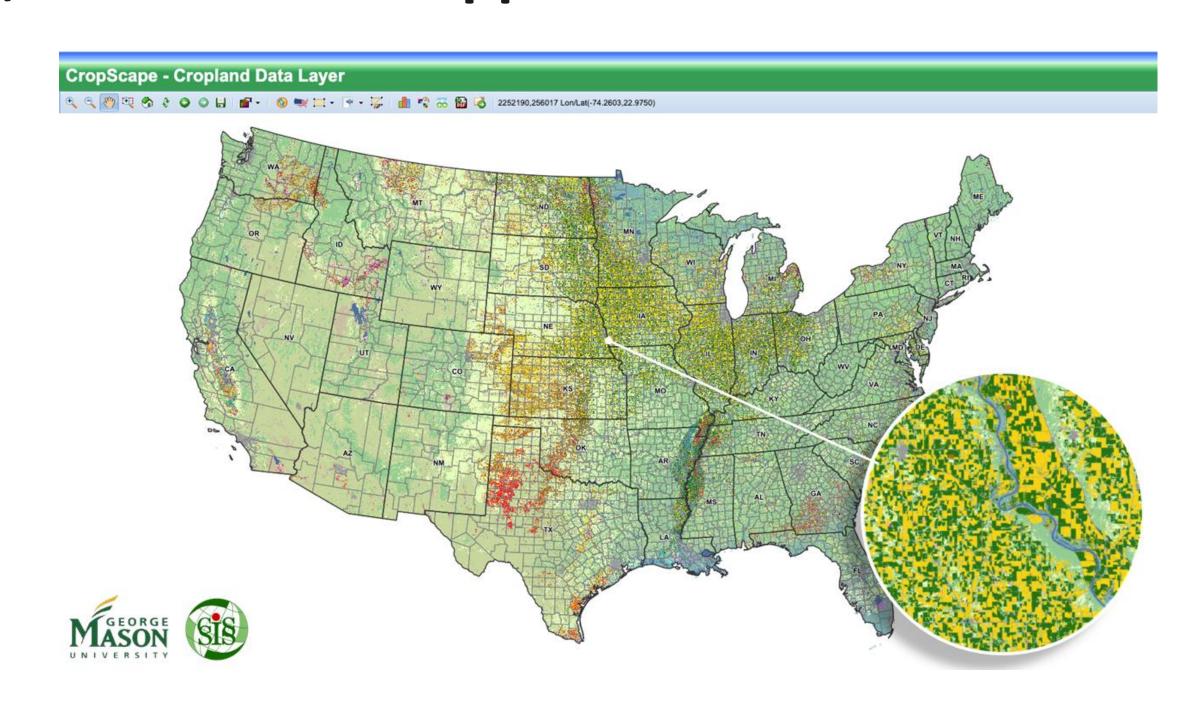
Digital Twinning: To CropSmart

NSF Convergence Accelerator Track J: Building a digital twin for national-scale field-level crop monitoring, prediction, and decision support



Liping Di (COS)

Director, Center for Spatial
Information Science and Systems



CropSmart Digital Twin (CSDT)—a public facing decision support system that provides the crop farming industry real-time data on the conditions of area crops, soil, weather and markets, decision trade-off, and optimal decision advice. CSDT supports the USDA's goal to increase U.S. agricultural production by 40% while also cutting the environmental footprint in half by 2050.

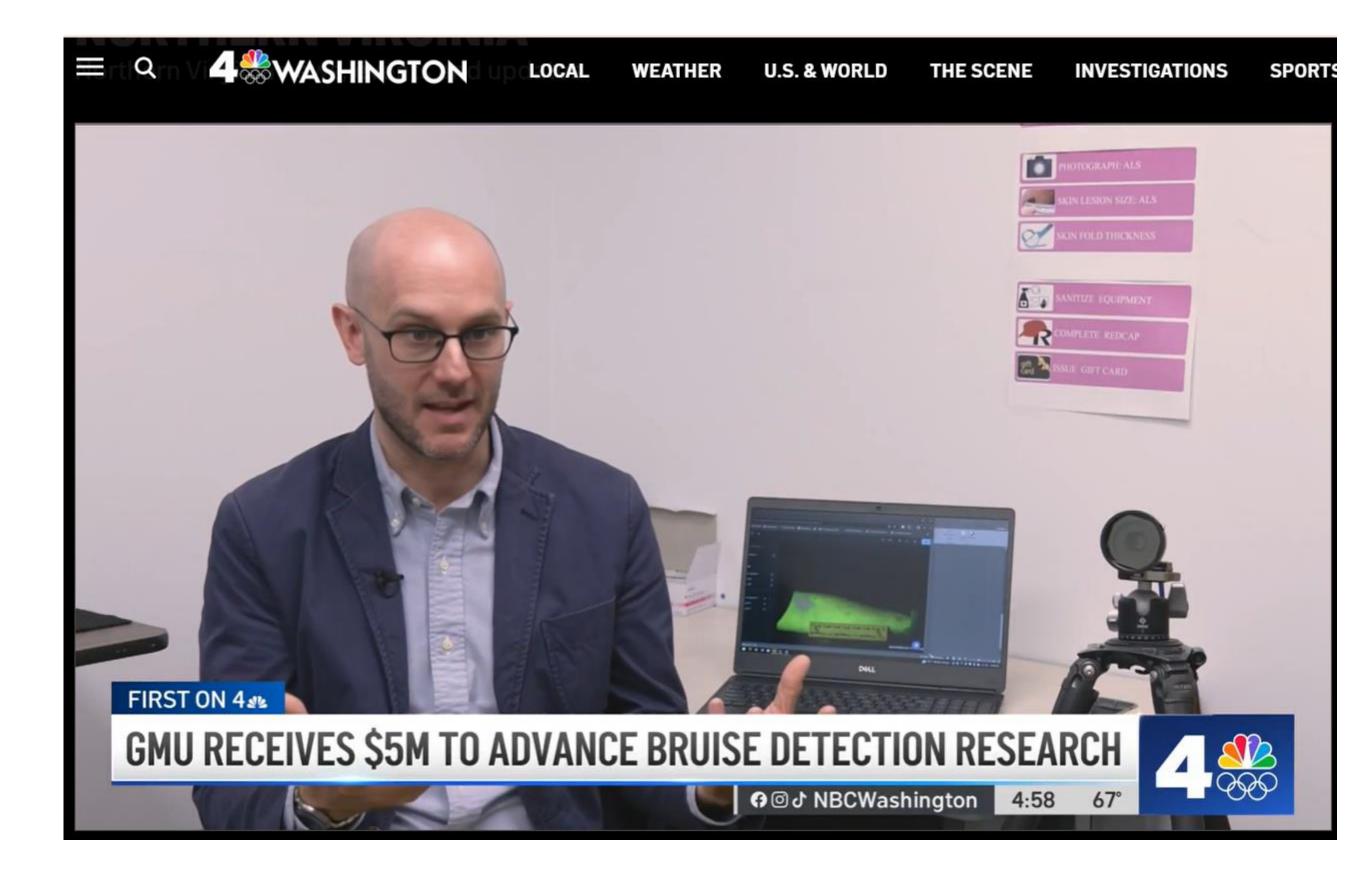


Bruise Project



The research team (from left) Janusz Wojtusiak, Katherine Scafide, and David Lattanzi. Photo by Ron Aira/Office of University Branding

George Mason receives \$4.85 million to increase intimate partner violence detection and reporting. The anonymous gift will help develop new tools in imaging technology using a light source that is five times better than white light for identifying and visualizing bruising across all skin tones for use by forensic nurses, social service providers, and law enforcement.



"A vital piece to success is ensuring that any AI tool has access to in-depth data from all skin tones and skin characteristics alongside human expert analysis," said Lattanzi, an associate professor in the Sid and Reva Dewberry Department of Civil, Environmental, and Infrastructure Engineering in the the College of Engineering and Computing.

Al Education & Workforce Development Programs Across Colleges





Explore the intersection of AI and national defense with the *AI4Defense*Scholars Program. Supported by agencies like the Air Force Office of Scientific Research and National Security Innovation Network, this program offers high schoolers and early undergraduates an opportunity to develop predictive algorithms and tackle modern security challenges. Dive into virtual meetings to enhance research and entrepreneurship skills. Then, participate in the AI4Defense Symposium at Mason Square (Arlington) on July 20th to showcase your innovations and connect with experts. Open to diverse backgrounds, join us in shaping the future of AI in Defense!

Open to All Rising 9th Graders, High School Students, and Early
Undergraduate



No application fees. Applicants will be notified of their selection by June 18th. *Successful completion of the program may fulfill your high school externship graduate requirement.







Al Education & Workforce Development Programs Across Colleges

Al and Tech Policy Summer Institute

The AI Strategies team held their first inaugural AI and Tech Policy Summer Institute from

May 22nd to May 24th, 2023.

View the program from our event here.

The AI and Tech Policy Summer Institute is designed to introduce Master's and Doctoral students in social sciences, humanities, and select professional schools to the following:

- Fundamental engineering concepts about how AI works
- Policy and regulatory frameworks that are evolving to govern Al
- Debates on AI ethics
- Issue areas including security, economic, and human rights concerns from local to global levels



Dhruv Deepak Sociology



Victoria Glasglow **Public Policy**



Ashish Hingle Information Science

and Technology



Riggs Ordonez International Security



Kate Park Literacies, Culture, and Reading Education



Ryan Pallas Political Science



Sneha Patel Masters Health Informatics



Xhulia Rapo Masters Public Policy



Josh Rose Masters International Security Global Commerce and Policy



Stephanie Wamandu Masters



Manpriya Dua PhD Computer Science



Vasilii Nosov PhD **Public Policy**

Tech 2

GRADUATE STUDIES UNDERGRADUATE STUDIES

K-12 Training



College of Humanities and Social Sciences

AI in the Humanities and Social Sciences

CHSS Curriculum Enhancement Mini-Grant

AI in the Humanities and Social Sciences

AI, data literacy

Use of AI tools

Incorporation Into research and methods courses across fields, disciplines

Role of AI in society

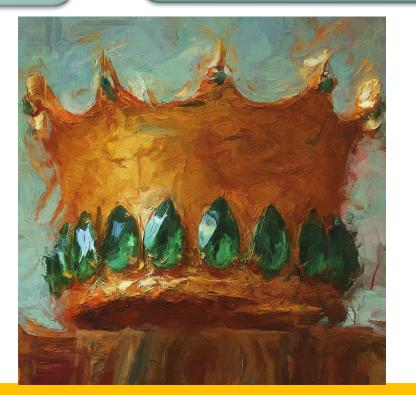
Past/Future of Al

Interdisciplinarity of/Interdisciplinary approaches to Al

Data: multiple aspects, disciplinary and interdisciplinary approaches

S Information: multiple aspects, disciplinary and interdisciplinary approaches
Al as technology

K-12 Training



Mason Unique Focus: Responsible Al Innovation

No other university in the Commonwealth has any minors, concentrations, or degree programs in AI, let alone in Responsible AI

Course Enhancement

Minors and Concentrations

BS/MS/PhD Programs

CpE

Al Education & Workforce Development Programs Across Colleges



Missy Cummings

Director of MARC and Responsible Al Program



Jesse Kirkpatrick (Ethicist)
Co-Director



Dasha Pruss

Assistant professor of philosophy and computer science; critically interrogate the social dimensions of algorithmic decision-making systems in the US criminal legal system.

Assistant professor of policy and computer science; interdisciplinary data-analytics scholar that examines the entrepreneurial, workforce and educational pathways of minoritized groups in science, engineering, and information technology.



Thema Monroe-White

Course Enhancement

Minors and Concentrations

BS/MS/PhD Programs

CpE

Al Education & Workforce Development Programs Across Colleges

Ethics and AI Minor

<u>CATALOG HOME</u> / <u>COLLEGES AND SCHOOLS</u> / <u>COLLEGE OF HUMANITIES AND SOCIAL SCIENCES</u> / <u>DEPARTMENT OF PHILOSOPHY</u> / ETHICS AND AI MINOR

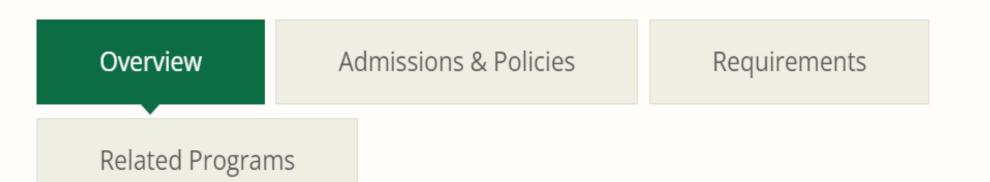
PRINT OPTIONS

Contact Information

6200 Horizon Hall Fairfax Campus

Website: https://philosophy.gmu.edu/ programs/la-minor-etai

Find Your Advisor •

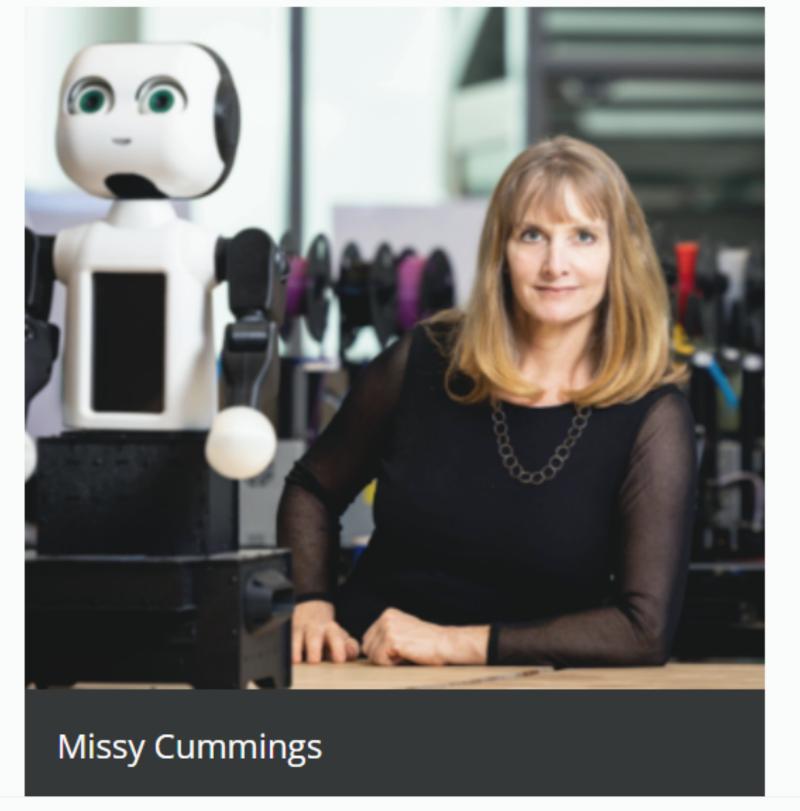


This minor is designed to equip students to tackle the moral complexity of Al-enabled technologies. It provides students with core competencies for thinking critically about the impact of Al in social and global contexts and allows them to apply their knowledge and skills via case studies, debates, and individual or team projects. The minor seeks to make ethical and social considerations a forethought in the design, development, deployment, and use of Al-related technologies. Given the role of Al-enabled technologies in our increasingly digital society, the minor is of relevance to all Mason students as engaged citizens and offers vital competencies to those planning for careers in such areas as computing and technology, government, public policy, health, law, education, and the media.

Al Education & Workforce Development Programs Across Colleges

K-12 Training

Under the guidance of <u>Missy Cummings</u>, a professor and the director of the <u>Mason Autonomy and Robotics Center (MARC)</u> at George Mason University, the <u>Responsible Artificial Intelligence</u> Graduate Certificate program addresses the pressing need for thoughtful Al integration into various industries.



"With the rise of large language models like ChatGPT, there is a critical need for companies to develop strategies for effectively and safely integrating AI into their systems. The Mason approach to Responsible AI emphasizes both rigorous technical and sociotechnical approaches to identifying and mitigating AI risks while achieving value-added outcomes," said Cummings.

Ideal candidates for this certificate program are "people responsible for ensuring the safe and efficacious adoption of AI into their companies or agencies who want to develop and update their skills to understand the design, testing, and implementation of cutting-edge technology," she added.

Al Education & Workforce Development Programs Across Colleges

BS/MS/PhD Programs in:

- ✓ Data Analytics Engineering
- ✓ Predictive Analytics
- ✓ Information Technology
- ✓ Machine Learning
- ✓ Information Systems
- ✓ Big Data
- **√** ...

Broad Portfolio in:

- ✓ AI, ML, Deep Learning, Big Data
- ✓ Natural Language Processing
- ✓ AI/ML-enabled technologies
- ✓ Predictive Analytics
- ✓ Statistical Learning
- ✓ Human-Centered Design
- ✓ Human-Computer Interaction

K-12 Training

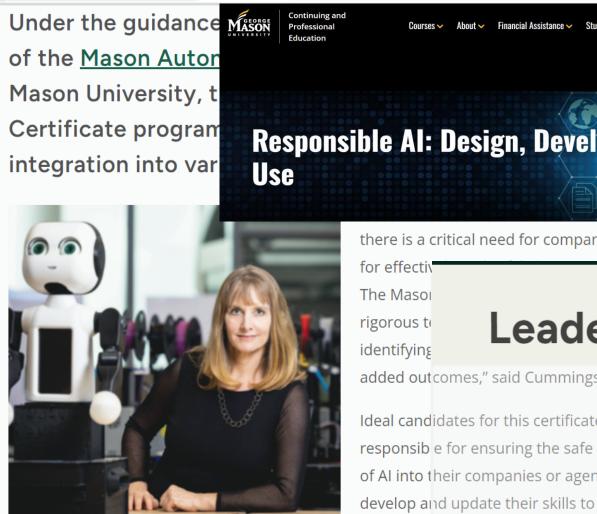
Course Enhancement

Missy Cummings

Minors and Concentrations BS/MS/PhD Programs

CpE

Al Education & Workforce Development Programs Across Colleges



Responsible Al: Design, Development, and

Leadership Strategies: Al and the Next U.S. Administration

deal candidates for this certificate pro testing, and implementation of cutting she addec



Who Is This For

- Current Senior Executive Service (SES) officials, Senior Leaders, and government officials.
- Private sector equivalents supporting SES and top government officials.
- Experienced executives skilled at leading change and leading people.
- Executives interested in Al's impact on public service missions.
- Newly executives exploring Al's effects on leadership and strategic frameworks for agency actions in 2025 and beyond.



Al Executive
Order
Webinar
Series



Representative Gerry
E. Connolly talks
cybersecurity, IT with
George Mason center
and students



PRESS RELEASE:
Bridging Research to
Practice in
Government CyberResilience and IT
Modernization



The October 30, 2023
Executive Order on the Safe, Secure, and Trustworthy
Development and Use of Artificial Intelligence: Is It Making Your Intellectual Property More Secure?

CEC+CCB+IDIA

George Mason to Launch Nation's First Center for Small Business Al Innovation with \$1M Grant

June 28, 2024 / By Buzz McClain

In a groundbreaking move set to bolster the economic competitiveness of small and medium enterprises (SMEs) across Virginia, George Mason University has been awarded a \$1 million grant to establish the nation's first Center for Al Innovation for Economic Competitiveness (CAIIEC).

In This Story

Amarda Shehu J.P. Singh

"I am proud to have helped secure funding for the Center for Al Innovation for Economic Competitiveness at George Mason," said Senator Warner in a statement. "This investment will help position Virginia as a leader in Al development by creating programs to help small businesses and communities thrive in the digital market, marking a huge win for Virginians across the commonwealth."

"I'm excited George Mason's Center for Al Innovation for Economic

Competitiveness is receiving \$1 million in federal funding, which I was proud to have helped secure in the recent government funding bill," said Senator Kaine. "This will help prepare small businesses and Virginians to harness AI and lead to new opportunities for economic growth and jobs in the commonwealth."

SCHAR+CEC+IDIA



U.S. Air Force and George Mason University Partner to Modernize Warfighter Mission Training, **Education and Research**



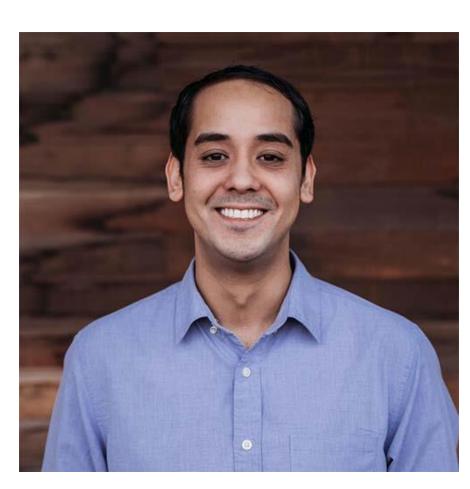


Published July 17, 2023

9th Air Force (Air Forces Central)

FAIRFAX, VA. -- Headquarters Ninth Air Force (U.S. Air Forces Central) formalized a partnership with George Mason University for joint research, rapid capability development, warfighter training, and education to support command mission readiness. The Cooperative Research and Development Agreement was signed on July 14, 2023 at the George Mason University Fairfax Campus by Mason Provost Mark Ginsberg and Lieutenant General Alexus





Highlight: Cameron Nowzari (CEC/ECE)

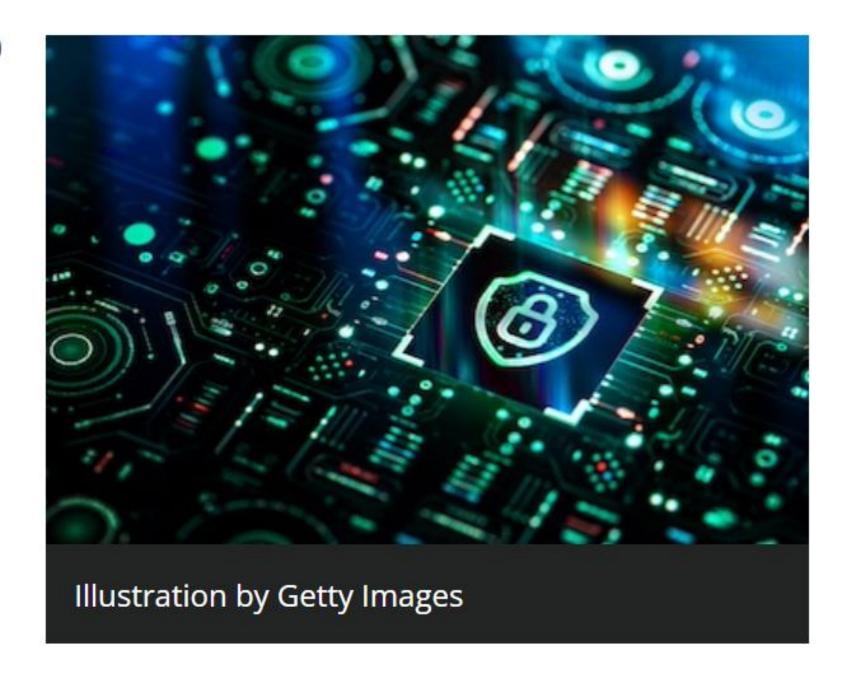


Mason selected for participation in Department of Commerce consortium dedicated to Al safety

February 14, 2024

Mason will be one of more than 200 leading Al stakeholders to help advance the development and deployment of safe, trustworthy Al under new U.S. government safety institute.

George Mason University has joined more than 200 of the nation's leading artificial intelligence (AI) stakeholders to participate in a Department of Commerce initiative to support the development and deployment of trustworthy and safe AI. Established by the Department of Commerce's National Institute of Standards and Technology (NIST), the U.S. AI Safety Institute Consortium (AISIC) will bring together AI creators and users, academics, government and industry researchers, and civil society organizations to meet this mission.



Mason is poised to lead in AI Literacy For All through novel, unique disciplinary and cross-disciplinary education and training programs

An Al-Powered University for the 22nd Century



► An Al-Powered University for the 22nd Century

Bringing Al to campus to:

- ☐ Support faculty, student, and staff development
- ☐ Forge new research, education, and workforce development spaces
- Transform Mason into an Al leader among R1 public universities



Executive Directive 5

ED-5 Recognizing the Risks and Seizing the Opportunities of Artificial Intelligence

September 20, 2023

View Document

"Include AI-related topics within technology, computer science and data analytics courses in K-12 and higher education to ensure students are equipped with the skills and knowledge needed to succeed in a rapidly changing world.

Support opportunities for Virginia colleges and universities to contribute to Al research and training, through collaborations with other academic institutions, private companies and government agencies."



Executive Order 30

EO-30 Implementation of Standards for the Safe Use of Artificial Intelligence Across the Commonwealth

💆 January 18, 2024

View Document

"K-12 schools and postsecondary institutions must embrace innovation, experimentation, and new educational opportunities for students as well as ensure appropriate guardrails and necessary constraints exist to safeguard individual data privacy and mitigate discriminatory outcomes [..] while also prioritizing training for students, educators, and faculty to ensure the responsible and ethical use of AI technology.

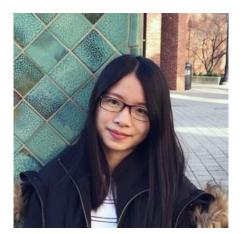
The Guidelines are also meant to support education institutions to [..] prepare all students with the knowledge, competencies, and skills for successful careers that utilize AI technology."



PatriBot: A GenAl ChatBot Assistant

- First use case: A 24hr chatbot answering student questions across the campus!
 - What programs are offered in CEC?
 - Where does the CS department locate?
 - I'm new to Mason; where do I live and eat?
 - Chess club? Communities for AI enthusiasts?

Faculty Tech Leads



Ziyu Yao



Marcos Zampieri

Students



Alphaeus E. Dmonte



Mohamed Aghzal

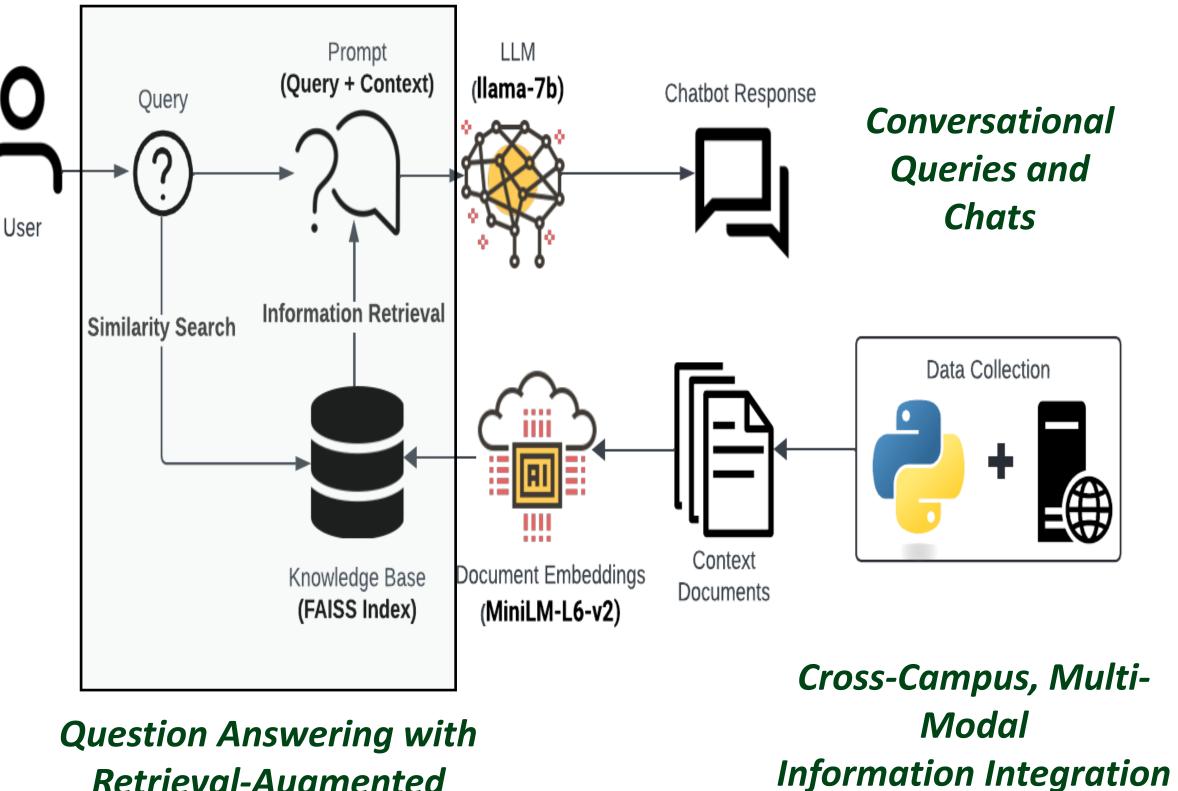
Faculty Supervisors

Amarda Shehu





Sarah Campbell

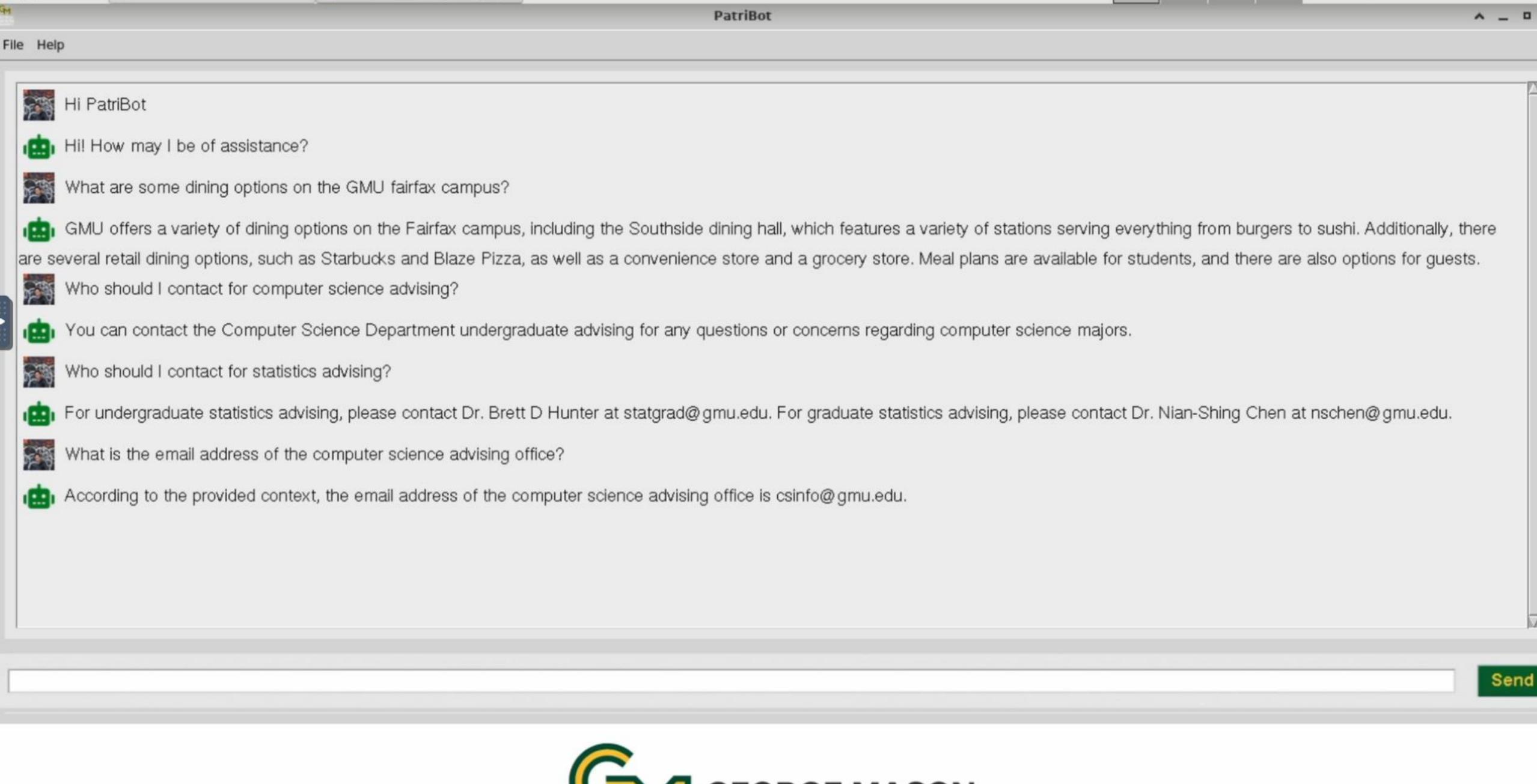


Retrieval-Augmented Generation (RAG)









Tue 16 Jul, 17:50 Mohamed Agh

* Applications

Terminal - maghzal@gp...





Al Across Mason Nation

Research

Education

Workforce Development

Partnerships – Community Engagement