

Preliminary Report:
James Madison University Presidential Task Force on Artificial Intelligence

14 February 2024

Commissioned by the Office of the President in Fall 2023, the initial work of JMU’s Task Force on Artificial Intelligence has been to identify the most critical issues posed to our campus by rapid technological advancements in generative artificial intelligence and by the new, broader availability of consumer artificial intelligence (AI) tools.

The Task Force—comprising more than 70 faculty and staff members from across the university, listed in Appendix A—worked through the late fall and winter, splitting into four subgroups to examine AI’s use and its impact from different perspectives. To date, these groups have focused on:

1. issues of authorship and the creation of new knowledge;
2. AI’s potential to impact the student experience;
3. critical societal and higher ed contexts for AI development and use; and
4. administrative applications of AI technologies at JMU.

In each strand of its work, the task force has centered the imperative to develop ethical and human-centered approaches to AI, with attention both to the dangers of algorithmic bias and to the potential of new technologies to help us create brighter futures.

Here, we share initial findings from each of our Task Force sub-groups to elucidate important next questions around generative AI that JMU must address — beginning with a contextualizing introduction from Group 3, New Contexts and Meaning.

Introduction: New Contexts and Meaning

The past year has marked a paradigm shift in the development of generative artificial intelligence, with deep implications for the future of higher education, work, creativity, ethics, and society. This introduction to our preliminary report explores the multifaceted impacts of artificial intelligence, touching briefly on new innovations it may herald; ways it may destabilize the existing sectors and markets we prepare JMU students to enter; its broader economic and social impacts; and issues of governance, privacy, and the new ethical and epistemic challenges that AI provokes.

Initial impacts of AI have been most pronounced in the realm of work. Creative industries have been traditionally perceived as less vulnerable to automation due to their reliance on human ingenuity; however, these fields are now at the forefront of transformation, with generative AI systems able to produce award-winning art and design in seconds. These systems can also write and edit code; summarize complex and voluminous information; conduct telemarketing; perform paralegal and accounting tasks; teach and tutor; compose music; and translate languages in real time. While previous automation technologies threatened predominantly routine, physical or transaction-based jobs, the present wave of AI innovation is poised to disrupt higher-paying, knowledge-based careers, which generally require some level of higher education.

In equal measure, AI represents a catalyst for immense innovation and progress—promising to enhance efficiency and reduce tedium, freeing its users to devote their energy to more impactful, deeply humane and satisfying aspects of their fields. AI can support rapid advancements in drug development and materials and environmental science, as well as deeper understanding of molecular biology and the living world. With its capacity to process natural language, AI can gather data from social media, including customer reviews and product information, which it can then use to develop better product designs, testing plans and personalization. Even in creative and cultural heritage fields, AI opens new avenues for expression and analysis, and may democratize access to tools previously limited to a few.

Beyond the world of work, we anticipate profound societal and economic implications of AI. The application of AI to policing, warfare and surveillance brings privacy and human rights concerns and the need for ethical decision-making to the fore. New intellectual property policies and norms must be developed so that users of AI may avoid plagiarism and related challenges to authorship. Moreover, AI's twinned capacity to hallucinate, or generate misleading information, can be used to create convincing deepfakes—realistic but artificial photos, videos, and audio—heralds a potential "post-truth" era where traditional means of discerning what's real become unreliable. An arms race between AI-generated content detectors and the generators themselves may further impair our ability to discern between real and manipulated content, thus undermining institutions (including institutions of higher education) based in the pursuit of logic and truth.

Addressing these challenges requires a balanced approach that recognizes AI's potential to contribute to progress and human flourishing while acknowledging its complexities. Accounting for AI's evolving impact on the world of work demands adaptive strategies that focus on retraining and skill development for students of all ages. Educational institutions themselves must evolve: modeling the wise application of AI, guiding students toward relevant careers, and developing all community members' capacity to utilize AI ethically and productively. On the economic and social front, AI-induced job displacement calls for a reevaluation of social safety nets—while governance and privacy concerns necessitate robust, transparent regulations that contend with AI's ethical use in sensitive domains like education, medicine, law enforcement, and warfare. To counter the epistemological challenges posed by AI, a concerted effort to enhance information- and data literacy, develop advanced detection technologies, and foster a culture of critical thinking and skepticism is vital. Collaborative efforts among various stakeholders (public and private) are therefore crucial in steering AI development toward a future that balances benefits and risks, while aligning it with human values and societal goals.

We may find ourselves anxious in a world where such technologies are increasingly pervasive in everyday life. Urgent questions arise:

- How can AI help to foster innovation in the workplace and improve quality of life? How can JMU students, faculty and staff best adapt their skills and learning strategies in a society with intelligent machines?
- What threats does AI pose to interpersonal relationships and human judgment? How is AI eroding trust in human (political, social, and economic) institutions, and what is the role of higher education in general and JMU in particular in combating that erosion?

- What are we trying to regulate and optimize with AI, both locally and at a societal level? Who should be making decisions about what should be regulated and optimized?
- What are AI's biases and unintended consequences? How can we ensure that the datasets used in predictive analytics are curated with sensitivity? Can we avoid becoming over-reliant on the automated decision-making capabilities of AI?
- What existential threats might AI pose, and how can we confront them effectively? What does responsible, responsive, and ethically aligned AI policy, legislation, and daily practice look like?

As a university community, we must prepare our students to succeed in a rapidly changing sociotechnical environment. JMU must also adapt, while remaining true to its purpose: continually challenging assumptions about the role of machine learning as an aid to curiosity, creativity, and critical thinking and uplifting authentic human inquiry about our place in the world.

Nationally recognized for its commitment to deep and purposeful learning, ethical reasoning, and civic engagement to address critical societal problems, James Madison University is well positioned to productively address both the risks and benefits of artificial intelligence.

In doing so, accountability is key. Our goal should not be merely to develop and use AI in a competitive market, but to improve architectures of social participation and collaboration; cultivate fresh approaches to innovation and entrepreneurship; democratize decision-making; and promote human flourishing. Through curriculum redesign, professional development, research and adherence to our core mission and values, JMU must lead our community to thoughtfully integrate AI technologies while preserving human values and connections. We must:

1. Identify and critically contextualize our concerns about ubiquitous AI, determining their degree of relevance within the context of human technological evolution and history.
2. Reconsider views of *superiority* and *inferiority* when exploring the full spectrum of cognitive capabilities in both humans and machines.
3. Study and actively promote more ethical frameworks to guide AI policy and legislation and to prepare students for the ethical application of artificial intelligence to the varied professional domains represented by JMU's colleges.
4. Enhance students' capacity to engage as critical consumers of AI-enhanced and AI-generated media through increased attention to data and information literacy.
5. Deliberately and broadly develop faculty and staff skills and knowledge in AI functions and underpinnings, and in the application of AI across the fields and roles represented by JMU.

We recognize that, facing swift inroads of AI into personal, social, occupational, commercial, and civic domains, members of our university community may struggle with feelings of

diminished agency and control. However, *as we adapt to rapid change and explore new opportunities, we staunchly uphold the enduring value of a James Madison University education.*

We encourage our campus to remain mindful of the irreplaceable, formative role of higher learning in enriching meaningful personal and collective experiences, livelihoods, and lives. Universities like JMU will continue to be places where intellectual growth, social connection, empathy, responsibility, and human intelligence are cultivated and thrive.

Authorship and New Knowledge

The creation of new knowledge using generative AI encompasses a broad range of issues. Work on this task force theme centered around the ethical and responsible use of artificial intelligence in research, teaching, and learning; academic integrity and the connection of generative AI to authorship; and the potential impact of AI on the ways educators foster students' critical thinking and their capacity for creative output, as well as on student, faculty, and staff production of new knowledge.

Task force members participating in the sub-group focused on authorship and new knowledge were asked to share the key questions they found critical for JMU to address as we consider the university's adoption of generative AI. Once everyone had an opportunity to contribute questions, participants ranked the questions by order of importance. Among 26 initial contributions, seven rose to the top. These are in order of priority:

1. How do we define authorship in works partially or fully generated by AI? What are the implications for academic integrity?
2. How can we make sure AI tools are accessible and beneficial to all students, regardless of their background or abilities?
3. What does responsible use of generative AI mean in a teaching and learning setting? Are there any differences when students move out of the university to the workplace?
4. How can we make sure that AI tools do not perpetuate or amplify biases, especially in educational and research settings?
5. How should human agency play a role in making ethical decisions when using AI in research, teaching, and learning? Where is the balance between pursuing efficiency while not losing control by human beings in this process?
6. How might widespread use of generative AI change the definitions of what is ethical, authentic, and valid? Will plagiarism, for example, have to be redefined?
7. How do we develop a common set of expectations related to AI use in teaching, learning, and research on campus across all of our disciplines and programs?

The subgroup's leadership discussed these questions and winnowed the list further to provide more focus in the next stage of the discussions. The next phase of work will focus on the following questions:

1. How do we define authorship in works partially or fully generated by AI? What are the implications for academic integrity?
2. What does responsible use of generative AI mean in a teaching and learning setting? Are there anticipated differences when students move out of the university to the workplace?
3. How can we use AI tools in ways that are accessible, intentionally avoid biases, and are inclusively beneficial to all students, regardless of their background or abilities?

Each of these responses can be summarized under the broader heading of ***how JMU might develop a common, campus set of expectations related to AI use in teaching, learning, and research across all of our fields and programs.***

A next step is to conduct a series of synchronous discussions (face-to-face and virtual) to explore these questions and highlight critical issues for JMU to consider in developing such a set of common expectations around questions of authorship, knowledge creation, and higher learning, including expectations around policy, support, and planning. These discussions will commence early in 2024, and this sub-group's next planned contribution will be to share synopses of these conversations, identifying the most important issues to take up in the short, medium, and long term.

AI and the Student Experience

Alongside core questions about authorship and the creation of new knowledge in higher education contexts, the potential impact of generative AI on the student experience is a fundamental consideration for JMU. The questions raised in this strand of the task force's work revolve around potential, responsible use of artificial intelligence for enhancing the broader student experience in areas like advising, counseling, and assessment. This discussion engages in the design of responsive student engagement, programming, support, and learning environments, and also explores the ethical pitfalls and inherent biases of generative AI.

Advising: The integration of AI tools into the *advising process* could cause a significant shift in how students navigate their academic journey. There is the potential for a system where AI facilitates personalized course recommendations and helps students answer common questions efficiently. However, the use of generative AI tools in advising raises questions about whether these tools could diminish valuable human interaction between students and their advisor. It is important to consider how generative AI could help advisors become more effective at their jobs and better armed with AI-powered insights into what courses are best for the student.

Counseling: AI could help bridge the gap between the overwhelming demand for counseling and the limited resources available. There are, however, massive ethical considerations for AI in this area. Sensitive scenarios (for instance, where a student may be discussing their mental health with an AI system) require a great deal of consideration and further thought. Given recent public disclosures of intellectual property and proprietary data leaked to the public because of a generative AI's learning model, it is imperative to consider what student data would be collected and how it will be protected. Further, it is important to understand the methodologies generative AI will use to advise students in order to ensure their safety. Exploration into AI-enhanced counseling is about finding the right balance between technological efficiency and maintaining the irreplaceable human touch in mental health support.

Assessment: There is potential for use of AI tools in evaluating various facets of the student experience, as well as student learning outcomes. AI-enhanced assessment tools offer the promise of deeper, more nuanced insights into our students' learning needs. This technology could be pivotal in enhancing approaches to education, allowing us to tailor methods and resources more effectively to meet the diverse needs of students.

Engagement, Programming, and Student Support: In the realm of programming and student support, AI holds the possibility of enriching students' educational and co-curricular experiences. AI-driven platforms and custom digital assistants could revolutionize how students engage with university life, from academic pursuits to extracurricular activities. A digital assistant might help students find events and workshops based on their individual needs and interests.

AI also holds promise for making educational content more inclusive and customized. Generative AI tools could assist in translation services, image recognition and other assistive technologies. These innovations would help provide more inclusive learning environments that help empower our faculty to make their courses more accessible and adaptable to student needs.

Finally, AI powered technologies are evolving the landscape of career exploration and job searching for our students. As various fields increasingly integrate AI, it is becoming important for our students to understand how AI is reshaping their chosen industries. We must consider the opportunities and challenges that AI presents to our students in their job search and interview processes.

Learning Environments: The integration of AI tools could transform the content and the modalities deployed at JMU to deliver instruction. It is important that, as AI tools are adopted, we ensure they are helping us to create dynamic, supportive, and personalized learning environments. A key consideration in achieving this is the continuing development of our faculty's understanding of AI and its uses, as well as the sharing of best practices to integrate AI appropriately and effectively into the learning environment. Additional consideration is needed to understand how employers are using AI and what skills students need to develop in the learning environment to best align with future career readiness. Just as we have incorporated digital literacy into our curriculum, there is a growing need to educate students from the onset of their JMU careers about the proper and ethical usage of AI.

Ethical Challenges and Inherent Bias: The brevity of this preliminary report does not provide enough space to adequately address the ethical pitfalls and inherent biases of AI. Some of the ethical challenges relating to the student experience have been identified in the narrative above, but there are many ethical questions to consider about how AI can be used and how it will impact our students.

Critical questions include:

- Will institutions need to reconsider how we assess student learning in the classroom?
- What should be done if a student expresses the desire to cause harm to themselves or others during a routine AI counseling appointment?
- What happens to student data after it is entered into an AI system? Who can access that data?

- As more students learn to use AI, will faculty integrate these platforms into their teaching or resist the use of AI in the classroom?

The vast amounts of data involved in generative AI and large language models make human oversight difficult. Understanding what data is being used and collected and how that data is protected is of the utmost importance to ensure the safety and privacy of students. How will state, national, and international regulations impact the ethical use of AI?

We assert that it is our duty as an institution of higher learning to guide our administration, faculty, staff, and students in the ethical use of AI. We must teach information literacy and stress the importance of fact checking, detecting bias and, most importantly, recognizing when and where to seek help. From the student experience perspective, simply condemning the use of generative AI will not be effective as this technology is quickly becoming integrated into everything we use.

Administrative Applications of AI

Our final task force sub-group focused on potential administrative uses of AI across our campus and finds that JMU has the potential to become a leader in AI within higher education institutions across multiple dimensions. This section of the report concretely envisions the implications of AI for the administrative functions of the university.

Administrative applications of AI in higher education are important to distinguish from other contexts or use cases for AI due to institutional constraints, external limitations, and large-scale coordination across divisions. JMU's administration operation has evolved from old paper processes to digitization and use of modern platforms such as Salesforce Constituent Relationship Management (CRM) system, Adobe Sign, PeopleSoft, and Canvas. Furthermore, as the institution has grown and transformed, JMU has positioned itself uniquely within our Commonwealth, national, and global landscapes. With recent advancements in AI; skyrocketing investments in the public and private sectors; and with the White House, Governor of Virginia, European Union and others devising AI and data strategies and signing directives aimed at harnessing the power of this technology and developing it ethically and safely, a natural step for JMU is to develop and implement a strategy that leverages and integrates AI into JMU's administrative workflows. An AI strategy, when implemented thoughtfully and carefully with input and feedback loops from all stakeholders and end users, can save human labor hours, save dollars and empower all employees.

In exploring the current landscape, task force members identified several areas where both AI technology and the policies surrounding its effective use already have a foothold:

- AI components are currently available in many of JMU's administrative applications, and Microsoft and other contracted vendors continue to incorporate new AI features into their products.
- [Reengineering Madison](#) is focused on the university's digital transformation and increasing the efficiency of the university's operations and business processes. AI is and will continue to be a vital component of the technologies and data infrastructure that this initiative delivers to the university.

- A [data governance body](#) is already in place at JMU, and it is being expanded to align its principles with Reengineering Madison. A convergence of AI, data governance, and Reengineering Madison principles with an implementation strategy is necessary for the successful, secure, and trustworthy adoption of AI at JMU.

In terms of specific applications, numerous administrative areas of the university would benefit from AI technologies, if properly applied. Examples include:

- Grant writing, processing, disbursement of funds, and managing budgets for research
- Routine and repetitive functions that do not use protected information
- Enhanced data-driven decision making and data analytics
- Reporting for auditing, compliance, and other purposes

We further find that much interest exists in exploring AI technologies for administrative uses; however, this is constrained due to the public nature of many of the AI tools that are widely available, combined with the private and protected nature of data that is involved in administrative applications. Tailoring AI tools for JMU specific applications and use cases requires appropriate JMU training data and integrated data pipelines. The content and data required to fully drive and train JMU-specific AI do not currently exist in the form needed to support JMU-tailored AI.

We need to make progress in a number of areas to use AI technology thoughtfully and effectively. Group 4, Administrative Applications of AI, makes the following recommendations:

- Content development will be the foundation supporting AI to answer complex questions posed by applicants, students, employees, alumni, and friends. Chatbots and other AI technologies need to rely on concise and accurate information curated for their use. Efforts to create and manage content will require a deliberate approach.
- A survey of the status quo is necessary. The following questions can be used to review current use, practices, concerns, and opportunities for administrative use of AI:
 - Do existing policies need to be updated or revised to include AI?
 - Are new policies needed?
 - What education and training gaps exist?
 - What current software, technology and platforms use AI?
 - What opportunities exist for JMU to develop its own AI?
 - What will support for such work cost in terms of financial and human resources?
- Many institutions and organizations are currently exploring AI integration. We must monitor pilot programs and changes in the AI landscape, particularly within Virginia and JMU's peer institutions. For example, The University of Virginia is piloting a UVA AI tool which is trained with UVA data and does not expose that data beyond UVA. Collaboration with the work at UVA will help provide information regarding the costs of implementing a JMU-only AI model.
- The Governor of Virginia recently signed a new [AI directive](#). We must explore how the Commonwealth's approach to AI impacts JMU and how JMU might influence and shape state policy (legal, policy standards, IT safeguards, student education and training, etc.).

- Privacy, trustworthiness, and security are paramount. We must evaluate the impacts of AI on privacy for administrative functions and research, and develop guidance on privacy implications for the university community.
- JMU is a campus rich with high level expertise. We must identify competencies, skill sets, knowledge and positions needed to advance AI for administrative use:
 - How can we leverage local subject matter experts to train and educate?
 - How can training and education on AI technologies be used as a retention tool for current employees?
 - What tools does JMU have that might be used to facilitate training, testing and experimentation with AI responsibly?
 - What will be required to ensure all employees are fluent in the appropriate use of AI technologies and are supported, especially as the approach to their work might change?
- Communication and buy-in are an integral part of the path to adopting new technologies. JMU must develop a communications strategy that is leveled for different audiences throughout the exploration and implementation processes. JMU should consider options other than emails, such as short presentations to interest groups, and a marketing strategy using multimodal communication at regular or significant intervals.
- A common, jargon-free language is important for participation and adoption. We must ensure that the language used around AI and machine learning does not create a barrier to entry, understanding, and informed decision-making. (For example, “black box” is a confusing and concerning term that is often used to describe machine learning embedded in applications.)
- Consideration and implementation of AI technologies should include data security, privacy, trustworthiness, ethical implications, and costs. It is important that we assess the initial deployment costs of any new technologies as well as continuing costs such as maintenance, updates, and support.
- Aligning JMU’s emerging AI strategy with the efforts of Reengineering Madison and the Data Governance Council is a natural step toward an AI-powered and -informed campus. This can be accomplished organically by including campus AI experts alongside others developing these new systems and workflows.

Conclusion

As the first phase of work by the Presidential Task Force on Artificial Intelligence comes to a close, we remain enthusiastic about the opportunities that JMU has to implement generative AI across campus, with careful attention to ethical and humane applications of these emerging technologies and to their impact on our various campus constituencies.

As a leader in civic engagement, ethical reasoning, workforce preparation, innovation, and the liberal arts, JMU is well positioned to address moments of technological and social change.

We look forward to continuing to explore various AI advancements, their concrete applications, implications for local policy and practice, and required investments and infrastructures — and to advising JMU senior leadership as it works toward a coherent organizational strategy to support our university community as new technologies drive higher education to evolve.

Appendix A: Task Force Contributors

Task Force Leadership:

Dirron Allen (Student Affairs); Robin Bryan (Administration and Finance); John Huffman (Student Affairs); Debbie Jordan (Advancement); David Kirkpatrick (President's Office); Bob Kolvoord (Academic Affairs); Peter Montwill (President's Office); Hala Nelson (Academic Affairs); Bethany Nowviskie (Academic Affairs)

Group 1: Authorship and New Knowledge

Stephen Aderton – University Marketing and Group 1 lead
Rodolfo Barrett – Learning Resource Centers and Group 1 lead
Andreas Broscheid – Center for Faculty Innovation and Group 1 lead
Kevin Hegg – JMU Libraries and Group 1 lead
Bob Kolvoord – College of Integrated Science and Engineering and Group 1 lead
Juhong Christie Liu – JMU Libraries and Group 1 lead
Mohammad Ala Uddin – College of Arts and Letters
Chelsey Bahlmann Bollinger – College of Education
Samantha Holly Becerra Reed – Audit and Management Services
Scott E Beckler – College of Health and Behavioral Studies
Howard Carrier – JMU Libraries
Kevin Hardwick – College of Arts and Letters
Weiming Hu – College of Integrated Science and Engineering
Manal Ahmad Jamal – College of Arts and Letters
Masoud Kaveh Baghbadorani – College of Science and Mathematics
Raihan Khan – College of Health and Behavioral Studies
Robyn Kondrad – College of Health and Behavioral Studies
Valerie Linsinbigler – JMU Libraries
Brennan Maupin – Office of Disability Services
Kevin Molloy – College of Integrated Sciences
Gracie Michelle Wingfield – Student Affairs

Group 2: The Student Experience

Dirron Allen – Student Affairs and Group 2 lead
John Huffman – Student Affairs and Group 2 lead
Anthony Miles – JMU Libraries and Group 2 lead
Andrea Adams – JMU Libraries
Sarah Brooks – College of Visual and Performing Arts
Jim Bywater – College of Education
Jack Garmer – College of Science and Mathematics
Kevin Hardwick – College of Arts and Letters
Yang Liu – The Learning Center and College of Health and Behavior Sciences
Marquis McGee – Academic Advising
Shaun Mooney – First Gen Student Success
Ren Oliver – Talent Development and Human Resources
Carolyn Schubert – JMU Libraries
Sam Squyars – University Career Center
JT Todd – Sexual Orientation, Gender Identity, and Expression
Taeho (Nathaniel) Yu – JMU Libraries (joining soon)

Raafat Zaini – College of Integrated Science and Engineering
JY Zhou – Center for Global Engagement

Group 3: New Contexts and Meanings

Sarah Cheverton – University Studies and Group 3 lead
Daniel George – JMU Counseling Center and Group 3 lead
Bethany Nowviskie – JMU Libraries and Group 3 lead
Afzal Upal – College of Integrated Science and Engineering and Group 3 lead
Laura Atkins – College of Business
Randal Budnikas – University Marketing
Marijn de Waal – College of Visual and Performing Arts
Michele Estes – College of Education
Thomas Finnegan – College of Science and Math
Philip Frana – University Studies
Angela Hayslett – College of Business
Michael Klein – University Studies
Sarah MacDonald – School of Continuing and Professional Studies
Sombo Muzata – College of Arts and Letters
Maryam Sharifian – College of Education
Rhonda Syler – College of Business
Catherine Zeman – College of Health and Behavioral Studies
Anthony Teate – College of Integrated Science and Engineering

Group 4: Administrative Applications of AI

Robin Bryan – Information Technology and Group 4 lead
Debbie Jordan – Advancement and Group 4 lead
Hala Nelson – College of Science and Mathematics and Group 4 lead
Jennifer Campfield – Provost's Office
Jojo Griffith – Talent Development
Lindsey Harvell-Bowman – College of Arts and Letters
Becky Holmes – Audit and Management Review
Teddy Levin – Engagement Fellow
Kathy Lubkowski – College of Integrated Science and Engineering
Paul Mabrey – Student Access and Enrollment Management
Christina Myers – Academic Resources
Layne Rexrode – University Events
Claire Rooney – Advancement
Matt Underwood – JMU Libraries
Luther Vucic – Advancement
Greg Hackbarth – Information Technology