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Office of Sponsored Programs

May 14, 2026



The Office of Sponsored Programs would like to wish everyone at Fairmont State a happy summer! Since faculty and students will be off campus for the summer, we will adjust the newsletter to a monthly update of available grant and funding opportunities until August 13, 2026. Enjoy your summer!

SPECIAL FEATURE

**Artificial Intelligence Analysis: WVSGC Funding
Enables Computer Science Students to Examine AI**

As the semester winds down and many faculty, students, and staff begin to prepare for summer, OSP wanted to reflect on a student research project for our final Special Feature of this academic year.

While the Office of Sponsored Programs rarely works directly with students, most of the sponsored programs on campus benefit undergraduate and graduate students at Fairmont State. One such program that directly benefits students is the National Aeronautics and Space Administration (NASA) West Virginia Space Grant Consortium (WVSGC) which provides students with funding to complete undergraduate research.

The WVSGC is comprised of West Virginia academic institutions and several corporate and scientific partners. Housed in the Benjamin M. Statler College of Engineering and Mineral Resources at West Virginia University, the WVSGC is dedicated to building research infrastructure and promoting Science, Technology, Engineering, and Math (STEM) education in West Virginia.

In particular, the WVSGC focuses on student fellowships, research, collaborations with high-technology industries, as well as K-12 and public outreach programs. Fairmont State University has had ample faculty-mentored undergraduate research projects funded through the WVSGC.

This academic year, Aaron Saas, Assistant Professor of Cybersecurity, led an undergraduate research project to evaluate the ability of artificial intelligence (AI) to write secure code. More specifically, Saas and two undergraduate students, Zach Pfaltzgraff and Shane Reall, worked together to assess AI's ability to write secure code when forced to encounter specific situations where humans are known to write it poorly, also known as Common Weakness Enumeration (CWE).

Given the state of the cybersecurity industry and higher education's overall concerns about AI, this project was pertinent and engaging research for the students.

"One of the most rewarding parts of this research was learning which models excelled at security and which didn't," said Reall, one of the Computer Science majors working on the project. "This is not only good to know but will also be incredibly useful in the future when it comes to using these models in actual software development positions."

To evaluate the AI-generated code, Pfaltzgraff and Reall used the following shared standards:

- Did the code mitigate the CWE?
- Was the code usable?
- Did the code introduce other security issues?
- Was the code documented correctly?

These questions were given a point range and then evaluated manually for scoring purposes.

"Through this project, we learned that while AI can write working code, it often still makes security mistakes," shared Pfaltzgraff, the other Computer

Science student working on the project. “The paid versions of the AI models weren’t always better than the free versions, either.”

Ultimately, the research indicated that the AI-generated code was insecure approximately 25% of the time it was used to generate code over a CWE. This suggests that there will be significant amounts of insecure code written by AI when the cybersecurity industry relies on this new tool. These research results aligned with Professor Saas’ expectations since AI has been trained on human-generated code, which includes issues of its own.

Funding from the WVSGC enabled the students to focus on their work but also to delve deeper into the research itself.

“The stipend has allowed me to spend more time focusing on the research without worrying about needing other work,” shared Pfaltzgraff.

Reall added, “Another rewarding part of this project was the honor of attending and presenting at the West Virginia Academy of Science earlier this month. It was fascinating to see so many other projects and presentations from not just the rest of the state but from my fellow Fairmont State University students as well.”

Through this sponsored project, Pfaltzgraff and Reall were able to engage in meaningful, industry-specific research relevant to their studies in cybersecurity. This research also helps the undergrads get closer to their goal of working as software developers after graduation.

SPECIAL NOTE:

Any grant application, proposal, or request for external funding must be reviewed and approved **prior to submission** through an internal process managed by the Office of Sponsored Programs. Please *visit our website* for more information and to access the required forms which facilitate the internal review and approval process.



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