

Computer Science Department Welcomes Grant-Funded Robot to Teach Students about AI



Computer science students at William Paterson University will benefit from a unconventional learning tool in their lab work — a humanoid robot powered by artificial intelligence. The Unitree G1 Edu Humanoid was acquired through a U.S. Department of Education grant supporting the University’s ASPIRE (Access to STEM Pathways through Integrated Research and Engagement) program, which recently earned national recognition for advancing STEM education and innovation.

Blending cutting-edge AI engineering with interactive design, the humanoid robot stands upright on two legs with articulated arms and three-fingered hands. Its sleek, human-like form includes a display “face” capable of showing expressions, helping it communicate and engage naturally with users. Powered by ChatGPT as its “brain,” the robot can hold conversations, answer questions, and respond to people in real time – just as ChatGPT

does in text, but through spoken dialogue and motion. Students will be learning how to teach AI by means of the robot.



Dean Venkat

Sharma meets the robot outside his office in Science Hall East.

“Today’s computer science graduates need more than coding skills; they need experience working with intelligent systems that think, move, and respond,” says Venkat Sharma, Dean of the College of Science and Health. “This kind of technology immerses our students in real-world problem solving and prepares them to lead in an AI-driven world.”

Computer science professor Nan Wang and student Adarsha Mishra ‘28 are currently programming and training the robot for classroom and research use.

“Right now, this robot is a research project — we’re still learning about it and teaching it at the same time,” Wang explains. “It can talk, walk, sing a song for you, and even dance, but it can only travel on flat surfaces. I’m trying to train the robot to use the stairs.”

Wang praises the robot’s balance, responsiveness, and potential as a learning tool.

“Working with the humanoid robot has been an incredible experience,” says Mishra, a computer science major. “We’re not just coding—we’re learning how AI, robotics, and natural language processing come together in real-world systems.”

Looking ahead, Wang and her students, in collaboration with other computer science faculty and their students, plan to expand the robot’s capabilities, including programming it to perform a pop song complete with choreography. The project reflects the department’s broader mission to explore how AI can learn through human interaction, creativity, and collaborative problem-solving.

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<https://www.wpunj.edu/articles/news/2025-10-27/humanoid-AI-robot-computer-science-department-william-paterson-university>