



University of Idaho

Department of Computer Science



Hello University of Idaho College of Engineering alumni and friends,

I am excited to share with you the innovative work happening in the [Department of Computer Science](#). Learn more about our cutting-edge research, academic programs, and the accomplishments of our talented students and faculty as we continue to shape the future of technology.

I began serving as acting chair of the department in August. Thank you to outgoing chair [Dr. Terry Soule](#) for his years of service. I am humbled to continue our department's trajectory of growth and research excellence.

We are Hiring!

We are conducting a [formal search for department chair](#) and will have several faculty positions posting soon. Please help us spread the word

about these opportunities across your professional networks.

If you have any comments, questions, or areas you'd like to hear more about, please email us at enr@uidaho.edu.

Daniel Conte de Leon, Ph.D.
Associate Professor, Acting Chair
Department of Computer Science
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Enrollment & Reputation Growth



As one of the largest departments in the university, the Department of Computer Science has set record enrollments in the college, with college enrollment growing overall more than 8.8% in fall 2024, including an 11% increase in first-year students and 21.9% increase in women pursuing engineering and computer science degrees.

For the second year in a row, our undergraduate computer science degrees have been recognized as the best in the nation by U.S. News and World Report. We also hold the best online and in-person master's degrees in computer science, as recognized by Fortune.

Growth of the Robotics and Automation program

Including students from ME and ECE, we have reached a total of 107 students in robotics classes in fall 2024. This is up from 57 last fall 2023 and 35 the fall before in 2022. [The U of I Center for Intelligent Industrial Robotics](#) and the department supported 12 graduate students this year and 11 undergraduate researchers.

We have now reached over \$2 million in donations to the robotics program and are expecting several new contracts over the next 6 months. The university has also asked us to submit the documentation to promote the center to a level 2 research center, which brings several new benefits regarding returned facilities and administrative costs from contracts.

Wiese Scholarship Student to Publish First Paper



Computer science junior Amanda Board will celebrate the publication of her paper in the Association for Computing Machinery's Special Interest Group on Knowledge Discovery and Data Mining this December.

Board spent her summer researching [her paper topic](#), integrating blockchain technology to large language models, like ChatGPT, to increase security, transparency and accountability.

Board is a Ray & Annie Wiese Scholar. The Ray & Annie Wiese Scholarship was established in 2021 in recognition of the positive impact of a degree in higher education earned at U of I. The scholarship helped cover Board's course fees, textbooks and a microprocessor kit for her embedded systems class.

"It is very powerful when someone is willing to contribute to your success," said Board, who is from Cle Elum, Washington, "Just the thought that someone is making an investment in me and believes in me whole heartedly, that they have faith in me."

In addition to her publication, Board is a member of the [U of I Society of Women Engineers](#) and enjoys working on video game projects in the classroom, in both technical and creative elements, and playing video games in her free time. After graduation, she said she hopes to work in game development.

The Department of Computer Science has seen student enrollment grow by 63% since 2020. Scholarships to support exceptional students like Amanda are needed to support its large and growing student body. The college is working to increase scholarship opportunities. If you're interested in starting a student scholarship, email Maggie Scott at maggies@uidaho.edu.

Give to CS Scholarships

Ma Earns Top Honors, Research Funding to Lead AI Application in Open Data



University of Idaho Associate Professor of Computer Science [Xiaogang \(Marshall\) Ma](#) has been awarded \$140,091 from the National Science Foundation (NSF) to apply AI techniques in the creation of a new intelligent open data platform for the world's largest databases on mineral species and their distributions, Mindat.

This award is a supplement to the NSF-funded OpenMindat project, [led by Ma](#) in collaboration with Mindat creators. The project is an open data service that will transform the way mineral data is accessed, shared, and utilized by the scientific community. Research support and collaboration is provided by the Institute for Interdisciplinary Data Sciences (IIDS).

Ma was recently selected by the Geological Society of America (GSA) for the M. Lee Allison Award for outstanding contributions to the field of geoinformatics and data science.

His paper, "OpenMindat: Open and FAIR Mineralogy Data from the Mindat Database," was published in the Geoscience Data Journal and received the Best Paper Award of 2024 during the Geoscience Information Society annual meeting.

[Visit Xiaogang Ma's Website](#)

ENGR, USDA Demo Robotic Weeding System to Improve National Reforestation



We are improving national reforestation efforts using Vandal robotics.

Our college recently demonstrated an advanced robotic device used to eradicate weeds at the Coeur d'Alene Nursery. The project is in partnership with the U.S. Department of Agriculture to improve national reforestation efforts.

The three-foot wide autonomous wheeled robot, designed by U of I computer science students, uses artificial intelligence to scan, identify and precisely locate growth within up to one-half inch. The robot uses electricity to eradicate weeds.

[Read About Project](#)

Our researchers in the news:

[Robot programmed to pull weeds and improve national reforestation introduced by U of I](#) - KREM Spokane

[ZAP! U of I students roll out robotic weeder for USDA nurseries](#) – Boise State Public Radio

[U of I, USDA demo robotic weeding system to improve national reforestation](#) - Idaho Press Tribune

[Tech meets trees: Robotic weeder tested in Coeur d'Alene forest](#) - CDA Press

[More About Robotics](#)

**AI-Augmented System for Sustainable Crop Production
Receives \$120K Grant**



The [U of I Center for Intelligent Industrial Robotics](#) is improving organic and sustainable crop production using artificial intelligence, bolstered by a \$120,000 grant.

The Idaho Global Entrepreneurial Mission (IGEM) grant will support the testing, deployment and improvement of artificially intelligent systems currently being tested across the U.S. to access microclimate and environmental information and improve sustainable organic crop production techniques.

The team has established two systems across the country, including at the Sandpoint Organic Agriculture Center and at Laurel Grove Wine Farm in Winchester, Virginia. The Sandpoint test system helps orchard operators track environmental conditions — including temperature, light, wind speed and air moisture — to make better decisions for the care of the unique heirloom fruit varieties growing on the 66-acre organic and sustainable agriculture production education and outreach center.

Our researchers in the news:

[Sizable grant and AI to help improve sustainable crop production](#) – Idaho Business Review

[AI-Augmented System for Sustainable Crop Production Receives \\$120K](#)

[Research Grant](#) – KMVT TV Twin Falls

[Super Smart Vineyards](#) – University of Idaho, 2023

Amalgamated Sugar AI + Machine Learning Partnership Grows

Our partnership with Amalgamated Sugar continues to grow, expanding research capabilities in artificial intelligence in manufacturing data analysis and food processing technology.

In addition to expanded courses and [new certificate programs in artificial intelligence and machine learning](#), computer science doctoral student Hunter Hawkins is leading efforts focused on utilizing specific AI techniques, particularly explainable AI, to conduct manufacturing data analysis, consolidating multiple datasets to increase factory safety, stabilize the output humidity, and increase overall throughput.

Amalgamated Sugar has generously donated \$385,000 to the Center for Intelligent Industrial Robotics for the support of another research scientist

to join Mary Everett, Ph.D., and John Shovic, Ph.D., in the research group. The company also funded an additional \$50,000 for AI equipment purchasing, undergraduate research support and an additional \$40,000 for robotics and automation scholarships.

Encourage New Vandals to Attend Engineer Like a Vandal Virtual Events



Our college's series of Engineer Like a Vandal virtual events will be held Dec. 4 and Feb. 4. Future Vandals can zoom chat with current College of Engineering students and recent graduates, and discover our hands-on, technical degrees and nationally recognized programs.

Registration is free, and events are open to all high school seniors interested in undergraduate engineering and computer science degrees at U of I.

Learn More About the Series

- April 24 and 25 – [Engineering Design EXPO](#) and [VIP program](#) for high school students

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