

# Umberto Gherardi

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Golden, CO

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## EDUCATION

### May 2025 B.S. Computer Science - Computer Engineering Specialty

Colorado School of Mines

- GPA: 4.0/4.0
- 2023-24 Transamerica C-MAPP Scholar
- 2021-23 Presidential Scholarship Recipient
- 2023 Undergraduate Research Fellowship (NSF)
- Dean's List (4/8 semesters)

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## WORK EXPERIENCE

### Can/Am Technologies | Software Developer Intern

May - Aug 2023

- Led the development of an internal-use Angular application and ASP.NET Core Web API to communicate with existing Oracle databases.
- Successfully resolved a manufacturer-related error with a major peripheral integration, potentially saving one client thousands of dollars.
- Actively contributed to the enhancement and development of the flagship product through the integration of backend and frontend sprint work.
- Performed code reviews and QA testing for several major features and fixes.

### Sierra Trading Post | Sales Associate

May - Dec 2022

- Collaborated with management to optimize store inventory organization, reducing the time and effort required for employees and customers to locate specific stock.
- Delivered high-quality customer service for online and in-store purchases.
- Successfully promoted the TJX Rewards program, resulting in substantial savings for the company and customers.

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## PROFESSIONAL EXPERIENCE

### Computer Science Dept. at Colorado School of Mines | Undergraduate ML Research Fellow

Aug 2023 - Present

- Research Focus: Machine learning framework design, optimization techniques, computer vision, bioinformatics.

### Google ExploreCSR Program | Undergraduate Researcher

Feb - Apr 2023

- Collaborated with the MInDS@MINES machine learning research lab to apply instance segmentation techniques within the field of biotechnology.
- Designed and implemented a web-scraping tool in Python 3 to collect and compile an extensive imaging dataset.
- Implemented and tested the effectiveness of the YOLACT: Real Time Instance Segmentation neural network, utilizing Google Colab for GPU processing.

### Association for Computing Machinery (ACM Student Chapter) | Vice President

Mar 2023 - Present

- Performed company outreach and established connections with representatives for bi-monthly tech talk events.
- Worked with other ACM officers to schedule events and plan weekly meetings.
- Helped organize the 2023 Mines HSPC event, a high school programming competition for local schools sponsored by the Computer Science department.

### Tau Beta Pi Engineering Honors Society | Member

Mar 2023 - Present

- Performed volunteering efforts through Tau Beta Pi to serve local organizations including the City of Golden and the BGOLDEN food bank.

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## PROGRAMMING SKILLS

### Proficient

- Python, SQL, JavaScript, C++, Java, Git

### Familiar

- HTML, CSS, Angular, C#, RISC-V Assembly, Verilog HDL

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## PUBLICATIONS

1. **Xiangyu Li, Umberto Gherardi, Armand Ovanessians, and Hua Wang.** "Beyond the Simplex: Hadamard-Infused Deep Sparse Representations for Enhanced Similarity Measures"