

Alex Fizer

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EDUCATION

University of Southern California

M.S in Computer Science, Specialization in Artificial Intelligence

Los Angeles, CA

Jan 2027- May 2028 (Expected)

The Ohio State University

B.S. in Computer Science and Engineering, Specialization in Artificial Intelligence, Minor in Business

Relevant Coursework: Data Structures, Algorithms, Machine Learning, Computer Vision

Columbus, OH

Aug 2022 - May 2026

Cumulative GPA: 3.4/4.0

WORK EXPERIENCE

Velocity Software Inc

Mainframe Intern

Columbus, OH

May 2024 – Aug 2025

- Built a Terraform provider in Go and HCL for automating IBM Z guest and virtual machine lifecycle management.
- Developed request handling, authentication, token management, and response functionality for the Terraform REST client.
- Designed and implemented a RESTful API enabling clients to send requests to individual mainframes improving efficiency.
- Implemented a MongoDB backed data pipeline across IBM Z systems for front end dashboards for monitoring mainframes.

Foundations of Software Components (CSE 2221)

Undergraduate Teaching Assistant

Columbus, OH

Aug 2024 – Dec 2025

- Assisted in weekly lab sessions for classes of ~40 undergraduate computer science and engineering students.
- Reinforced foundational software engineering concepts including object-oriented design, abstraction, recursion, and design-by-contract principles with Java.
- Graded programming homework assignments and projects ensuring correctness, adherence to contracts, and code quality.

PROJECTS

3LC Cotton Weed Challenge

Oct 2025 - Dec 2025

- Developed an edge-constrained YOLOv8n object-detection system in a three-person team to identify three weed species in cotton-field imagery.
- Improved validation mAP@0.5 from ~0.65 to 0.85 through annotation correction, model refinement, and knowledge distillation.
- Used the 3LC dashboard to identify and correct any mislabeling or ambiguities within the provided dataset on a per-sample basis.
- Applied UMAP and HDBSCAN on YOLO embeddings to detect outliers and guide the refinement of the provided dataset.

Contrastive Learning on Synthetic Images

Oct 2025 - Nov 2025

- Built a self-supervised computer vision pipeline that generated 64,000 shape images.
- Trained 2 six-layer convolutional encoders to learn color-sensitive and shape sensitive representations.
- Implemented contrastive alignment and uniformity losses, data augmentation, and nearest neighbor image retrieval.

ACITIVITIES

Artificial Intelligence Club

President

Columbus, OH

Aug 2023 – June 2026

- Led an organization serving 200+ members through weekly technical workshops, projects, seminars, and professional-development events.
- Organized Ohio State's largest student run Artificial Intelligence Hackathon (HackAI) and annual AI Research Expo
- Worked on building a deep learning facial recognition project using PyTorch to recognize various emotions

Code 4 Community

Member

Columbus, OH

Aug 2024 – June 2026

- Collaborated with fellow members to teach K-12 students fundamental coding concepts in underfunded Columbus City schools.
- Worked with teams to design interactive games and lessons that cover an introduction programming concepts such as data structures, conditionals, and object-oriented programming.

SKILLS

Languages: Python, Java, C++, Go, REXX, HTML/CSS, JavaScript, SQL

Tools: PyTorch, YOLOv8n, REST APIs, Git, Microsoft Suite, SolidWorks