

Zach Crennen

Computer Science + Data Science
Colorado School of Mines
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Skills

Machine Learning, Data Science, Statistics, Python, R, Project Management, Leadership

Education

Colorado School of Mines, Golden, CO

(Expected Graduation: December 2024)

Bachelor of Science in Computer Science + Data Science

Cumulative GPA: 3.8/4.0

Relevant Coursework: Machine Learning, Algorithms, Linear Algebra, Statistics, Game Theory, Operating Systems

Organizations: Tau Beta Pi, Machine Learning Club, Adventure Leadership Community

Work Experience

Research Assistant - Montana State University

(May 2024 - August 2024)

- Participated in the Research Experience for Undergraduates (REU) program in the BMW lab.
- Conducted experiments measuring drone propeller frequency and tilt angle using wingbeat modulation LiDAR.
- Worked under the supervision of Dr. Bradley Whitaker in the Electrical and Computer Engineering department.
- Gained experience with SLURM and High-Performance Computing (HPC) environments.

Teaching Assistant - Colorado School of Mines

(March 2024 - December 2024)

- Teaching Assistant for DSCI 570/CSCI 470 - Machine Learning, under Dr. Zibo Wang.
- Held office hours to assist students with homework and course material.
- Graded assignments and quizzes, ensuring consistency and fairness in evaluations.

Research Assistant - Colorado School of Mines

(February 2024 - December 2024)

- Undergraduate researcher in the ARIA lab under the supervision of Dr. Kaveh Fathian.
- Led a research project focused on robot cross-view localization using semantic image segmentation techniques.

Software Engineer Intern - Fulfilld

(August 2023 - December 2023)

- Developed and implemented a reinforcement learning algorithm for optimal bin packing in a warehouse management startup.
- Led the design and development of the simulation environment.

Software Engineer Intern - Sigil, Inc

(February 2022 - August 2023)

- Conducted R&D for an ecommerce brand protection startup, developing web scraping tools with Selenium and BeautifulSoup to gather data from major retail sites like Amazon and Walmart.
- Pitched and explained product capabilities at CES 2023.
- Utilized LangChain for prompt engineering to accurately match items between product catalogs and listings from adversarial gray market sellers, enhancing brand protection efforts.

Projects

HawkWolf - Founder

(July 2023 - August 2023)

- Founded HawkWolf, an AI-powered platform designed to identify and locate distressed real estate properties for potential investment opportunities.
- Developed a Convolutional Neural Network using TensorFlow to scan and analyze over 20,000 properties.
- Gained hands-on experience with BigQuery, Google Cloud Storage, NumPy, and Pandas for data management and processing.

Clean-Plate

(December 2022 - January 2023)

- Developed a service that sends daily text messages notifying users of school events offering free food.
- Designed and implemented the project's architecture, including web scraping, prompt engineering, AI-powered content generation using the OpenAI API, and SMS integration.