

Alexander Ellingsen

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Education

Montana State University Honors College, Gianforte School of Computing

2022 - 2026 (expected)

- Bachelor of Science in Data Science, Bachelor of Science in Computer Science (*Cumulative GPA*: 3.96)
- **Relevant Classwork:** Object-Oriented Programming, Algorithms and Data structures, Discrete Mathematics, Embedded Systems, Machine Learning, Data Visualization, Data Analytics, Linear Algebra, Statistics, Multivariable Calculus, Technical Communication

Experience

Undergraduate Researcher, Montana State University

Bozeman, Montana

June 2024 - Present

- Created a program in Python to interact with APIs to collect more than 3000 pieces of data to enable high-quality analysis, allowing the research team to make informed decisions
- Wrote and deployed a web scraper in Python to automatically collect thousands of samples, enabling examination and research to continue without the need for official API access
- Drafted a five-page funding proposal to secure a multi-thousand dollar Undergraduate Scholar's grant, allowing the research team to be properly compensated for their work

Undergraduate Course Assistant, Montana State University

Bozeman, Montana

April 2023 - Present

- Assisted in instructing over 100 students in two different introductory Python courses, allowing students to gain a solid understanding of programming fundamentals
- Answered questions related to coursework and assignments, providing a resource for academic success and engagement
- Analyzed and graded students' homework and tests following a specified rubric, ensuring accuracy and fairness

Software Engineer, Space Science Engineering Laboratory

Bozeman, Montana

February 2023 - January 2024

- Created a TCP server in Python to communicate with satellite data between in-house computers, allowing for streamlined data transfer
- Designed, wrote, and documented software to collect and format satellite data in Python and Ruby. Increased total data intake by upwards of 300 packets per day
- Build a graphical interface using InfluxDB to display telemetry data, creating a user-friendly GUI to access multiple types of data easily

EMEC 203: Mechanical Engineering Computations Lab Assistant, Montana State University

Bozeman, Montana

November 2023 - December 2023

- Instructed Mechanical Engineering students in a specialized introductory Python class, creating a strong foundation in programming and increasing average grades by upwards of 50%
- Clarified and assisted with concepts relating to the lab work, including answering questions about common Python libraries such as Matplotlib and Pandas

Technical Skills

Languages: Python, JavaScript, Java, C, Kotlin, R, Rust, Go, Ruby, SQL, HTML/CSS

Software/Tools: Git, GitHub, Linux, LaTeX, Docker, Kubernetes, Jupyter, Matplotlib, Pandas, Numpy, Scikit-Learn

Awards

- Montana State President's List: Spring 2023, Fall 2023
- Montana State Dean's List: Fall 2022, Spring 2024
- Eagle Scout: 2015 - 2021
- Stanford Online and DeepLearning.AI Machine Learning Specialization: August 2024
- freeCodeCamp Responsive Web Design Certificate: September 2023