

Andrew Ebert

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EDUCATION

University of Colorado, Denver

Denver, CO

Bachelor of Arts in Computer Science, Bachelor of Science in Mathematics

Jan 2022 – May 2025

- **GPA:** 3.73/4
- **Relevant Courses:** Fundamentals of Computing, Data Structures, Algorithms, Database Concepts, Fundamentals of Unix, Introduction to Optimization, NLP & LLM, Software Engineering, Numerical Analysis, Statistical Theory, Calculus, Linear Algebra, Differential Equations, Math Clinic, Data Science, Machine Learning, Graph Theory
- **Future Plans:** Actively applying to CU Denver's 4+1 Data Science MS program.

EXPERIENCE

Student Researcher

Denver, CO

University of Colorado, Denver – Physics

June 2023 – July 2024

- Automated the execution of 18 jobs on supercomputers using JSON.
- Compiled code, primarily using Intel compilers and Intel MKL, to run high-performance computing jobs and optimize performance.
- Developed machine learning models (Random Forest and Binary Classification) using Python to classify 4 classes of electronic/atomic transitions.
- Analyzed and visualized complex datasets, collaborating with a team to create scripts using Matplotlib and Pandas.
- Participated in a group research presentation on high-performance computing at CU Denver's 2023 Research and Creative Activities Symposium ([RaCAS Presentation](#)).

Construction Laborer

Aurora, CO

Accell Construction

Aug 2021 – May 2023

- Applied a strong attention to detail and effective time management to efficiently complete tasks while ensuring the client's specifications were met.
- Collaborated with a team, balancing individual tasks with collective goals of ensuring projects were completed on time.

PROJECTS

Fitness Tracker App | *Java, Git*

- Led a team of three individuals on a class project to develop an Android application using Java.
- Managed version control using Git to ensure consistency across contributions.
- Facilitated communication between team members to ensure all project deadlines were met on time.

Apartment Database | *SQL, MySQL*

- Designed and implemented a relational database to simulate operations within an apartment complex.
- Created and executed SQL queries using MySQL to manage tenants, apartments, and maintenance records for efficient retrieval and data management with over 1000 manual entries.

Portfolio Optimization | *Python, Python API, Gurobi*

- Utilized Python APIs to web scrape companies listed in the S&P 500.
- Formulated an optimization problem to maximize portfolio returns, ensuring the selection of at least 25 stocks, each contributing to no more than 20% of the total, to reduce volatility.
- Employed Gurobi to solve the problem with a maximum allowable variance of 7%.

TECHNICAL SKILLS

- **Programming Languages:** Python, C++, C, Java, R, SQL
- **Tools & Technologies:** Git, Linux, Unix, MySQL
- **Data Visualization:** Pandas, Matplotlib
- **Optimization:** NumPy, SciPy, Pyomo
- **Machine & Deep Learning:** Scikit-learn, PyTorch