Andrew Ebert
CS & Math Student

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EDUCATION

University of Colorado-Denver (Jan 2022 – May 2025)
B.S. Applied Mathematics
B.A. Computer Science
GPA: 3.73
Upcoming Courses: Data Science, Deep Learning, Machine Learning, Data Mining, Software Engineering

RELEVANT EXPERIENCE

Student Researcher - University of Colorado-Denver, Physics (Jan 2023 – July 2024)

- Automated the execution of 18 jobs on supercomputers using JSON, via https://amosgateway.org.
- 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 four 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 - 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 Application

- 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.

Portfolio Optimization System

- 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%.

SKILLS & ABILITIES

Programming Languages: Python, C++, C, R
Data Visualization: Matplotlib, Pandas
Machine/Deep Learning: Scikit-learn, PyTorch
Optimization: Numerical Methods, NumPy, SciPy, Pyomo
Tools/Technologies: Git, Linux/Unix, Intel MKL, SQL
Mathematics: Calculus, Linear Algebra, Differential Equations, Probability and Statistics