Michael Maggiore

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EDUCATION

Colorado School of Mines | Computer Science B.S. Exp: May 2025 | GPA: 3.92

Coursework: Data Structures & Algorithms, Computer Organization, Database Management, Introduction to the Linux Operating System, Introduction to Data Science, Foundational Programming Concepts and Design

SKILLS

Experienced in - Python, JavaScript, C++, Pandas, Git

Familiar with - HTML, Tensorflow, Scikit-Learn, Data Visualization, Jupyter Notebook, AWS, SageMaker

WORK EXPERIENCE

Technology Intern **at Poly** *Internship | June 2022 - Present*

- Worked **front-end** to implement a UI on the company's product app, where numerous designated endpoints can instantly connect to a video conferencing room from the control of one host, speeding up business meeting times by 15 minutes. Leveraged **Python's Tkinter** library to create the app's entire layout and functionalities.
- Assisted in performance optimization of the company's video conferencing devices by gathering data analytics and performing cross-platform analysis of the video and sound quality from various competitors' equipment using **Pandas** and **Matplotlib**. Improved efficiency in testing the hardware and software of these devices by implementing a hashing algorithm to generate unique hidden tests using **Python**, saving over 20 hours of testing time.
- Collaborated across company teams, including the product management team to design applications.

Mines Undergraduate Research Fellow **at Colorado School of Mines** *Part-time | May 2022 - Present*

- Implemented machine learning and neural network techniques to IoT traffic data to investigate different network models that can run locally on the IoT device, securing users' privacy and safeguarding data from being leaked on a remote server.
- Simulated top commercially available cameras by deploying object detection models on a Raspberry Pi using **Tensorflow** and **Python**.
- Compared performance of on-device object detection with on-server object detection through leveraging **AWS**.

PROJECTS

Portfolio Website *July 2022 - August 2022*

- Designed my personal website to be interactive and responsive using **HTML**, **CSS**, and **JavaScript**.

Stock Price Predictor *March 2022 - May 2022*

- Designed a machine learning model in **Python** to predict the next adjusted closed price of a stock by fitting a support vector regression algorithm to a stock dataset using support vector machines.
- Utilized **Pandas**, **Matplotlib**, and **Scikit-Learn** to train and test the SVR model on the pre-given Kaggle dataset, evaluating the stock price history of companies like GOOG and AMZN over a 20-year period.
- Applied cross-validation to evaluate which kernel (polynomial, linear, or radial basis function) would be the best to use for prediction. RBF would be best as it had a mean score of 0.784, making it the closest kernel value to 1.

Hot-Swap Keyboard *January 2022 - May 2022*

- Fabricated an assistive mechanical keyboard for the elderly. It is a ready-to-market device with unique features such as custom programmable keycaps, 1.3x increased button size, and hot-swap capabilities.
- Enabled the keycaps to be swappable and correctly assigned to their user-specific program. Coded an **Arduino** in **C++** to allow the microcontroller to identify and read the specific voltage level of a pressed keycap.
- Awarded **First** overall out of 120 teams at the Spring 2022 Cornerstone Design@Mines Competition.