Andrew Fox

Boulder, CO
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Education

University of Colorado Boulder **Aug 2023 – May 2027**
Bachelor of Science in Computer Science and Electrical & Computer Engineering *Boulder, CO*

Relevant Coursework

- Calculus 3
- Differential Equations
- Linear Algebra
- Data Structures
- Computer Systems
- Principles of Programming Languages
- Software Development
- Digital Logic
- Circuits as Systems

Technical Skills

Languages: C++, Scala, C, Assembly, Python, Java, Dart, Swift, LaTeX, HTML/CSS, JavaScript
Developer Tools: VS Code, Vivado, SIMetrix, LTSpice, Waveforms, Android Studio, XCode, Google App Script
Technologies/Frameworks: GitHub, Git, Verilog, Flutter, Google Cloud Platform, Ubuntu

Experience

Western Colorado University/RMBL **June 2024 – Aug 2024**
Student Researcher *Gunnison, CO*

- Trained a binary semantic image segmentation model to identify snow in high precision aerial photos with 99% accuracy
- Learned machine learning techniques as well as research principles and best practices

Steel City Codes **June 2021 – June 2023**
Chapter Head/Teacher *Aurora, CO*

- Taught advanced python covering topics of functions, object-oriented programming, inheritance, and references
- Founded a chapter with 30 students, organized venue and volunteers to help teach

Cablenet Wiring Products Inc. **Nov 2021 – Feb 2022**
Soldering Technician *Centennial, CO*

- Worked with previous NASA engineers on wiring electrical boards and circuits
- Learned various soldering techniques and how to safely operate soldering equipment

Projects

Extensible Framework for Static Analysis | *Scala, Flix* **Aug 2024 - Dec 2024**

- Worked with PhD students in an independent study to create a modular, general framework for Abstract Interpretation
- Writing a paper for submission to a journal

Abstract Interpretation | *Scala, Java* **Jan 2024 – Feb 2024**

- Developed a Scala project that could execute static analysis on a simple AST represented programming language
- Used Scala to create a hybrid functional and imperative project

Poker Bot | *Python, Git, Github* **Sep 2023 – Jan 2023**

- Developed a program to analyze a given hand in Texas Hold 'Em poker and output the strength
- Worked on a team with the goal of making a bot capable of playing, and winning, poker

Extracurricular

Engineering Honors Program **Fall 2023 – Present**
Member *University of Colorado Boulder*

CU Quants **Fall 2023 – Present**
Member *University of Colorado Boulder*

- CU Quants is an interdisciplinary student-led organization dedicated to promote quantitative finance and provide students with applied learning opportunities in quantitative finance.
- Worked on a Poker Bot to practice and learn probability and risk assesment.
- Working on a making server/client protocol system from scratch modeled after the FIX system used by the New York Stock Exchange.