ARTHUR GOLDBLATT

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Education

University of Berkeley, California — Berkeley
B. Eng. Electrical Engineering and Computer Science — *Aug 2018 – May 2022*

- 3.79 GPA
- relevant coursework: Algorithms, AI, Databases, Data Science, ML, Security

Coding Projects

Spam/Ham | *Python, Jupyter Notebooks, pandas, plotly* — Nov 2020

- Develop a logistic regression classifier that distinguishes between real Spam and Ham emails with a 92% success rate.
- Visualize data with distribution plots for length characteristics, heatmaps for correlation, barplots for word frequency etc. to help engineer features
- Process emails by removing html, removing stop words, and stemming words and finding 10 most common words in spam not in top 50 of ham and vice versa.

EtE Encrypted File Sharing System | *Go* — Oct-Nov 2020

- Design and implement a secure file sharing system in Go similar to Dropbox.
- Encrypt all information using techniques such as hashing, public key encryption, symmetric encryption, MACs, etc.
- Support efficient appends by creating a struct system so that each time a file is added to only the new information must be encrypted
- Write full testing suite to ensure everything functions as expected no matter the edge case

NumC | *C, Python* — May 2020

- Emulate Numpy functionality by writing and then translating C methods into Python using Python's C API reference
- Speed up code by using techniques such as SIMD and Caching
- Results in code that manipulates matrices up to 100x faster than Python without optimizations

Honest | *Swift, Google Firebase* — Oct 2019

- Develop an IOS app that scans QR codes for product authentication
- Generate unique QR codes on the merchant's end and compile them into a downloadable pdf
- Connect front end to back end with Google Firebase

Pacman AI | *Python* — Sept 2019

- Create a Python program that allows Pacman to solve complex mazes.
- Implement a variety of search algorithms (A*, UCS) along with determining consistent heuristics.
- Optimize heuristic for finding nearest food by accounting for walls; performed 25% better than expected.

Experience

Academic Tutor — Oct 2019 – Present
UC Berkeley — *remote, part time*

- Tutor students 1 on 1 for subjects such as Data Structures, Data Science, Linear Algebra, etc.
- Took CS 370 to learn about CS pedagogy
- Adapt to remote learning by using Zoom and screen sharing to help my students

Technical Skills

Languages: Python, Java, Go, C, SQL, Lisp, JavaScript, HTML/CSS
Developer Tools: Jupyter Notebooks, Git, Google Cloud Platform, XCode, Amazon AWS
Libraries: Numpy, pandas, plotly

Interests

Books (most recent: *Just Mercy*) | Golf | Road Biking | Skiing | Tennis | Basketball | Stormy Weather | Tea