Arthur Goldblatt

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Education

University of California, Berkeley   Berkeley, CA
B.S. Electrical Engineering and Computer Science   *Aug 2018 – May 2022*
- 3.79 GPA
- Relevant coursework: Algorithms, AI, Databases, Data Science, ML, OS, Optimization Models, Security

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Experience

AI Developer Intern   May 2021 – Aug 2021
Stottler Henke Associates   *San Mateo, CA*
- Developed ML interpretability image pipeline for ML-based Autonomous Maritime Entity Recognition system.
  * Added various pre and post-processing functions, such as cropping to the ships' bounding boxes.
  * Increased the data loading pipeline's efficiency by 31% using tensorflow optimization.
  * Created a UI in Tkinter for demoing the ML classification model performance on real and synthesized ship image data.
  * Generated training and testing splits on ship images to test robustness of model.
- Generalized diagnostics platform, developed Model-Based Reasoning diagnostics module for interactive space suit management system(Astronaut Agent) with MQTT-based intermodule communication.
  * Built out Python simulation for NASA next generation spacesuits (slide 20 of this document) to test our diagnostics platform on.
  * Created UI-friendly plots using matplot to demo the simulation, displaying variables like fan RPM speed, air temperature, water volume, CO_2 partial pressure sensor readings, etc

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Coding Projects

ML Spam Filter | *Python, Jupyter Notebooks, pandas, plotly*   May 2021
- Developed a logistic regression classifier that distinguishes between real emails and spam emails with a 92% success rate.
- Visualized data with distribution plots for length characteristics, heatmaps for correlation, barplots for word frequency etc. to help engineer features
- Processed 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
- Designed and implemented a secure file sharing system in Go similar to Dropbox.
- Encrypted all information using techniques such as hashing, public key encryption, symmetric encryption, MACs, etc.
- Supported efficient appends by creating a struct system so that each time a file is added to only the new information must be encrypted
- Wrote full testing suite to ensure everything functions as expected no matter the edge case

Honest | *Swift, Google Firebase*   Oct 2019
- Developed an IOS app that scans QR codes for product authentication
- Generated unique QR codes on the merchant's end and compiled them into a downloadable pdf
- Connected front end to back end with Google Firebase

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 (last read: *Merchant in Venice*) | Golf | Road Biking | Skiing | Tennis | Basketball | Stormy Weather | Tea