Noah Schill
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EDUCATION:

Brigham Young University, Provo, UT December 2022
Bachelor of Science in Computer Science, Data Science emphasis
GPA: 3.47

RELEVANT COURSEWORK:

- Machine Learning at Brigham Young University
- Systems and Network Programming at Brigham Young University
- Data Science Capstone at Enveda Biosciences
- Advanced Algorithms at Brigham Young University
- Web Development at Utah Valley University

SKILLS:

- **Proficient:** Python, Java, C, Linux, HTML/CSS, Pandas, SKLearn, Numpy, Keras
- **Moderate:** SQL, PyTorch, Bash, JavaScript, jQuery
- **Familiar:** Apache Spark, Rust, Docker

EXPERIENCE:

Department of Computer Science at Brigham Young University
Undergraduate Research Assistant January 2021– Current

- Creating and maintaining a machine learning pipeline for analyzing cultural dimensions using word embeddings (BERT) and neural networks trained on social media source text. (one paper currently under review for a major ACM journal)
- Writing numerous scripts to scrape tweets and conduct sentiment analysis using Python and various APIs and libraries.
- Working with Meta to analyze disinformation campaigns on Facebook.
- Creating a comprehensive library of privacy design patterns that are sound with the state-of-the-art research for developers and researchers.

Undergraduate Computer Science Projects:

Data Science Capstone with Enveda Biosciences

- Developed models that can generate and verify in-silico datasets of mass-spectrometry data for data augmentation to aid drug discovery.
- Analyzed mass-spectrometry data using various scientific Python libraries.
- Engineered GANs and Transformer-based models.

Multi-layer Perceptron Classifier:

- Wrote Python classes that implemented SKLearn's MLPClassifier with backpropogation from scratch.
- Used these classes for the iris classification problem.

Algorithm Design and Analysis

- Implemented a dynamic programming approach to find shortest edit distance between gene sequences.

- Implemented Traveling Salesperson problem using branch and bound.

ANES Dataset Analysis

- Conducted an in-depth analysis of the ANES voter database to asses trends in voting.
- Identified correlations between survey responses and religious affiliation.

Android Application and Server

- Developed an Android application that allows a user to interact with Family history data using maps. Supported a full account management system and used Google Maps API.
- Developed an HTTP server in Java and SQLite to handle account management and user information storage.

Personal Projects:

Home Server:

- Actively developing an open-source, decentralized, privacy-centered and environmentally-friendly, Linux-based home server as an alternative to traditional personal cloud solutions like iCloud.
- A plug-and-play home server which requires minimal setup, unlike most network-attached storage solutions available today.
- Will implement VPN, media server, device backup, email, among other things.

COVID Counter:

- A small Raspberry Pi-powered device to display number of active COVID cases
- Actively scrapes data from the New York Time's COVID database.
- Wrote a manual python driver for a 7-segment LED display to display COVID cases.

Audio/Music:

- Developing virtual and hardware musical synthesizer instruments.
- Creating boutique audio processing plugins using Rust and Max DSP.
- Repairing vintage audio circuitry.
- Recording, mixing, and mastering of personal and local music projects.