Clarence Chan

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Education

University of Maryland ***College Park, MD***
B.S. in Computer Engineering *Expected May 2021*
Relevant Coursework: Object-Oriented Programming, Computer Systems and Security, Data Structures, Algorithms, Computer Architecture, Operating Systems, Machine Learning, Computer Networks, Multi-Media Signal Processing, Digital Computer Design, Semiconductor Theory, FPGA Design

Technical Skills

- **Programming Languages**: **Python** – Proficient, **C/C++** – Proficient, **Unix** – Proficient, **Java** – Proficient, **Javascript/Typescript** – Intermediate, **SQL** – Intermediate, **OCaml** – Beginner, **Rust** – Beginner, **Verilog** – Beginner
- *Other Technologies: Google Cloud Platform* – Proficient, *GDB/Valgrind* – Proficient, *Git/Github* – Proficient, *Node.js* – Intermediate, *React Native* – Intermediate, *Firebase* – Intermediate, *Django* – Intermediate, *Elasticsearch* – Intermediate, *MATLAB* – Intermediate, *Apache Spark* – Beginner, *OneSignal* – Beginner

Work Experience

Gardenio ***Austin, TX (Remote)***
Data Science Intern *May 2020 to August 2020*
- Researched and proposed potential features and capabilities of weather data, such as real-time alerts and forecasts for users' plants.
- Developed Firebase cloud functions to retrieve weather alerts based on a user's provided zip-code and store 7-day weather forecast data to minimize the number of API calls the database would have to make.
- Established a foundation for future developers to continue development of the weather alert feature as well as other weather data applications to improve the business value of the product significantly.

Exaleap ***Santa Clara, CA***
Software Engineering Intern *May 2019 to August 2019*
- Created a searchable email database with Elasticsearch for an internal communication platform hosted with a Django web framework for employee productivity and to improve transparency.
- Implemented a sentiment analysis feature for the search engine which calculates the average sentiment of a keyword across the entire database for market research and to analyze the market's perspective about the main product.
- Utilized Apache Spark to detect common words in emails to determine important project names or other nouns and calculated the average sentiment for each common word.

Deep Brain Neurotechnologies – UMD ECE Department ***College Park, MD***
Undergraduate Research Fellow *January 2018 to May 2019*
- Collaborated with neurologists and other experts at the University of Maryland Medical Center (UMMC) on projects such as a magnetic steering helmet and fMRI analysis with neural networks to investigate neurodegenerative diseases.
- Ran simulations on Sim4Life, an electromagnetic solving software provided to us by Zurich MedTech, for several different types of deep brain stimulation the MIDA model.
- Investigated convolutional neural networks using graph theory principles to simulate neuronal networks in the brain.

Projects

Over-Sand Vehicle *August 2018 to December 2018*
- Engineered an autonomous vehicle that can travel over different terrain to complete a chemical analysis mission.
- Worked with a team to design the vehicle and determine important milestones and benchmarks our vehicle had to meet to complete the mission
- Programmed the Arduino microcontroller (in a C-based language) to control the vehicle, interact with an RF communication system, and read data from a digital pH meter.