Nathan Chung

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EDUCATION

University of Maryland College Park **College Park, MD**
Bachelor of Science, Computer Science (Data Science) *August 2019 — May 2023*

- **Honors:** Science, Discovery, and the Universe Scholars Program (3% acceptance rate for applicants)
- **Organizations:** Alpha Kappa Psi Professional Business Fraternity
- **Selected Coursework:** Object-Oriented Programming, Computer Systems, Programming Paradigms, Algorithms, Discrete Mathematics

EXPERIENCE

JP Morgan Chase **Remote**
Software Engineering Virtual Experience *July 2020 — August 2020*

- Designed a dashboard to allow equity traders to visualize and monitor trading strategies for live stock price feeds.
- Leveraged JP Morgan's open source visualization framework, Perspective, to support stock filtering and aggregation functionality.
- Implemented calculation pipelines to compute metrics such as bid-ask spreads and simple moving averages in real-time.

PROJECTS

Unix Shell Reconstruction | *C, Unix, Emacs*

- Re-Engineered a Unix shell to support input/output redirection, command piping, and command chaining via the "&&" operation.
- Created a parser to parse and validate user input, and an executor to execute commands and apply subshell forking when necessary.

WordNet Semantic Graph | *Ruby*

- Constructed a Directed Acyclic Graph (DAG) to represent the semantic relationship between words.
- Architected semantic graph to group words into synonym groups (synsets), and map "is-a" relationships from hyponyms (child synset) to hypernyms (parent synset).
- Developed a command parser to allow users to perform actions on the semantic graph such as word lookup, least common ancestor search, and hyponym-hypernym relationship load.

To-do list Web Application | *Python, Flask, SQLalchemy, HTML, Ginger Templating*

- Created a todo list web application using Python and Flask.
- Utilized WTForms and Refactoring in Flask in order to allow the user to edit and delete their tasks.
- Created API to handle get/post requests.

SKILLS

Technical Skills: Java, C, Python, Ruby, OCaml, Flask, SQL, Assembly (AVR)

Tools: Git, Emacs, Unix, Jupyter Notebook, Windows, Excel, Powerpoint, Word

Languages: Native English, Limited Working Proficiency in Korean

Interests: Music Production, Fashion, Soccer