

# Nathan Chung

Phone: (240)-750-8621, Email: nathanchung80@gmail.com

Website: <https://nathannchung.github.io>

## EDUCATION

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**University of Maryland – College Park**

*Bachelor of Science, Computer Science (Data Science)*

**College Park, MD**

*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

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**JP Morgan Chase**

*Software Engineering Virtual Experience*

**Remote**

*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

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**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.

**Predicting Stock Prices with Linear Regression** | *Python, SKLearn*

- Standardized stock ticker data from Quandl into Pandas Dataframes.
- Developed a Linear Regression Model to predict stock prices 30 days into the future given adjusted closing prices.
- Used a 80-20 split for test/train datasets, trained a linear regression model over the training data and tested for accuracy.

**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

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

**Tools:** Git, Emacs, Unix, Jupyter Notebook, Pandas, SKLearn, Ginger Templating, Windows, Excel, Powerpoint, Word

**Languages:** Native English, Limited Working Proficiency in Korean

**Interests:** Music Production, Fashion, Soccer