Michael Chun

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Education

University of Maryland, College Park — College Park, MD
Bachelor of Science in Computer Science — *Expected May 2025*

Relevant Coursework: OOP, Data Structures and Algorithms, Intro to Computer Systems, Discrete Math, Lin Alg

Experience

Data Science Research Intern — May 2023 – August 2023
Human-Data Interaction Research Group — *College Park, MD*

- Developed tools using **Python**, **JavaScript**, **CSS**, and **HTML** focusing on SVG element manipulation, resulting in the automation of data visualization process
- Created a **JavaScript** tool to analyze **100+** chart corpora used in automated chart analysis and extracted data to summarize key patterns and trends
- Built a custom HTTP back-end server with **Python**, capable of serving files, handling GET requests, and processing POST requests for storing JSON data
- Created functionality allowing users to save SVG annotations to their home directory and provided a reload feature

Geophysical Student Researcher — Sep. 2021 – July 2022
Environmental Visualizations Research Stream — *Binghamton, NY*

- Led a team that enhanced harmful algal bloom detection efficiency by **25%** using **MagMap2000** and **ThermoMeter** for drone-based hyper spectral imaging, outperforming traditional satellite methods
- Organized logistics for 3 research expeditions to Lake Erie, identifying optimal study locations

Climate Science Research Intern — May 2020 – Dec. 2020
School of Atmospheric and Marine Sciences — *Stony Brook, NY*

- Spearheaded initiative of prediction models for Hurricane Sally's precipitation changes from climate change using **Python**, resulting in **100+** detailed 2D visualizations that compared IMERG and CAM5 data
- Designed data extraction and plotting by utilizing **PyNIO** and **PyNGL** to handle multidimensional array modules from **NASA EarthData**
- Produced spatial and temporal mapping of climate data by leveraging **Xarray** and **NumPy**, which revealed a **61.5%** increase in precipitation due to climate change

Projects

Analytic Tracking App | *JavaScript (Vue.js, Express.js, Node.js), HTML/CSS*

- Developed a web application for tracking player statistics across different gaming platforms by extracting data from an external API
- Implemented a Vue Router using **Vue.js** to create a dynamic web application that updates the interface based on user interaction and send notifications using Vue-toasted
- Utilized **Express.js** to optimize back-end routing and middle ware, improving server response times by **18%**

Study Chrome Extension | *Typescript, React.js, HTML/CSS*

- Designed a Chrome Extension using React with a customizable timer

Interactive Cell Clear Game | *Java*

- Developed a board-based game with dynamic animation by applying **OOP** principles, including abstraction, encapsulation, and inheritance

Technical Skills

Languages: Java, Python, JavaScript, Typescript, C, MIPS Assembly, HTML/CSS, MATLAB
Frameworks: React, Node.js, Vue.js, Express.js
Developer Tools: Git, VS Code, Eclipse, PyCharm, IntelliJ, Emacs, Vim
Libraries: Xarray, NumPy