Michael Chun

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Education

University of Maryland, College Park — College Park, MD
Bachelor of Science in Computer Science — *January 2023 – May 2025*

SUNY Binghamton University — Binghamton, NY
September 2021 – September 2022

Experience

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

- Designed a tool leveraging JavaScript, Python, CSS, and HTML to streamline the annotation process for chart corpora in SVG elements, enabling efficient **data visualization automation**
- Examined **56 chart corpora** used for automated chart analysis and extracted data on format, scope, collection method, annotations, and diversity to summarize patterns
- Wrote a Python script for a **HTTP back-end server** that serves files, handles GET requests, and processes POST requests to save JSON data to files
- Created save feature by exporting and reloading specific annotation variables to the HTTP server
- Utilized GitHub to maintain a centralized repository, merge code changes, and participate in code reviews with the team

Student Researcher — Sep. 2021 – July 2022
First Year Immersion Program: Environmental Visualizations — *Binghamton, NY*

- Improved the efficiency of harmful algal bloom detection by showcasing a **25% increase in detection efficiency** of drone-based hyperspectral imaging over satellite imaging
- Facilitated a research trip to Lake Erie to gathering insights on the effects of harmful algal blooms in the community and identified three optimal study locations streamlining data collections processes
- Delivered a presentation at the annual FRI Proposal Poster Research Session to esteemed researchers and philanthropists associated with the FRI program

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

- Obtained NASA EarthData to analyze the effects of climate change on Hurricane Sally's precipitation, generating 2D visualizations comparing over **100+ IMERG and CAM5 files**
- Utilized **data I/O packages, PyNIO and PyNGL** for extracting and plotting data from **netCDF3 files**, using a multidimensional array module
- **Leveraged Xarray and numPy** to enable spatial and temporal mappings and enable labels on arrays that revealed a 61.5% increase in precipitation

Projects

API Integrated Analytics App | *JavaScript (Vue.js + Node.js), HTML/CSS* — August 2023 – Sept. 2023

- Utilized API integration to collect real-time data from Apex Legends servers, including player statistics, match history, and leaderboard rankings.
- Vue Router was used to create a smooth and dynamic single-page application (SPA) experience, enhancing user engagement and navigation
- Leveraged Express to create RESTful API endpoints for serving data to the frontend, ensuring seamless communication between the client and server

Snake | *JavaScript, HTML/CSS* — Jan. 2023 – Feb. 2023

- Developed an interactive classic Snake game using JavaScript, HTML, and CSS showcasing proficiency in **front-end web development**

Technical Skills

Languages: Java, Python, JavaScript, HTML/CSS
Frameworks: Node.js, Vue.js, Express.js
Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: Xarray, NumPy