

## MICHAEL CHUN

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### Education

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#### University of Maryland

*Major in Computer Science*

**Binghamton University, State University of New York**

**College Park, Maryland**

*January 2023 - Present*

**Binghamton, New York**

*September 2021 - September 2022*

### Skills

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#### Coding Skills

Java, Python, JavaScript, HTML/CSS, Ruby, NumPy, Xarray

#### Technical Skills

Adobe Lightroom, Adobe Premiere Pro, Davinci Resolve

### Experience

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#### Research Intern

**University of Maryland**

*Human-Data Interaction Research Group*

*June 2023 - Present*

- 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 backend 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

**Binghamton University**

*First Year Immersion Program: Environmental Visualizations*

*September 2021 - July 2022*

- 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

**Stony Brook University**

*School of Atmospheric and Marine Sciences*

*May 2020 - December 2020*

- 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

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#### Snake

**College Park, MD**

*January 2023 - April 2023*

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