Justin "Avery" Chan

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EXPERIENCE

MAterials Simulation Toolkit Machine Learning (MAST-ML) Madison, WI
Member June 2020 – Present

MAST-ML is an open-source machine learning Python package with a focus on the material sciences. Contributing to the tool by implementing various functionality proposed by supervisor Dr. Ryan Jacobs. Tasks include:

- Data-twin removal to help improve model performance (**Python**).
- Graphs to summarize classification models (**Python**).
- Exploration of gp-learn library and other feature generation methods (**Python**).

Halo Science Chicago, IL
Developer Intern May 2021 – August 2021

Halo is a startup focused on pairing researchers to various funding sources. Contributed by implementing features and designs at the direction of the CEO or UX designer and fixing bugs. Other highlights:

- Setup tools to increase developer productivity and adherence to component-driven development (**Storybook**, **Chromatic**).
- Developed a new component library to reduce redundancy of code (**React**, **styled-components**).
- Wrote web scraping Python scripts to aid the marketing team (**Python**).

EDUCATION

University of Wisconsin-Madison Madison, WI
B.S. Major in Computer Science | B.S. Major in Data Science August 2019 – December 2022 (expected)
Major GPA: 3.95 | Cumulative GPA: 3.75 | Dean's List 3 semesters

- *Relevant Completed Coursework:* Advanced Programming in Java; Discrete Mathematics; Computer Engineering; Applied Statistics for Engineers; Introduction to Artificial Intelligence; Machine Organization and Programming; Introduction to Operating Systems; Introduction to Algorithms; Introduction to Data Modeling; Software Engineering; Introduction to Human-Computer Interaction; Introduction to Computer Networks; Introduction to Data Modeling II; Introduction to Bioinformatics
- *Current Coursework:* Matrix Methods in Machine Learning; Data Science Programming II; Computer Graphics; Statistical Experimental Design

SKILLS AND INTERESTS

Programming: Java, Python, JavaScript, HTML, CSS, C, R

Technologies: React, Node.js, Jekyll, Git (CLI), Storybook & Chromatic, LaTeX, Tableau

PROJECTS

Projects selected to show a variety of project topics and programming languages. Check out more on my website or GitHub.

- **Personal Website:** Set up my website using Jekyll and wrote Python scripts to scrape GitHub **(Jekyll, Liquid, Python)**.
- **Steam Hours:** Created scripts to interact with the Steam API and analyzed data with R **(Python, R)**.
- **Handwritten Digit Classifier:** Created a neural network from scratch to learn how neural networks work **(Java)**.
- **Just-Read-Less-Features:** Forked a chrome extension that standardizes the styling of online articles for daily use **(JavaScript)**.
- **Work Visualization:** Visualized a year of self-reported data on where I spent my time working **(R, D3.js)**.
- **Lightbulb:** Created a tool to connect people of different talents looking to work on projects. Competed in 2021 Transcend Competition **(React, Node.js, Express)**.
- **Antibiotic Visualization:** Made a static visualization that effectively communicates antibiotics data. **(R, Tableau, Figma)**.

EXTRACURRICULAR ACTIVITIES

- **Co-Leader, FoodShed (Coding for Good):** Created an app for the campus club FoodShed that collects free (surplus) food (**Typescript, Angular, Ionic**).
- **Member, Causal Architecture (AI Club):** Learned a theoretical approach to artificial intelligence by reading research papers.
- **Member, Coding for Good Website:** Contributed to the Coding for Good website (**EJS, JavaScript, HTML**).
- **Founding Member, Free and Open-Source Software (FOSS) Club:** Helped to start the UW-FOSS club by facilitating general logistics (email and meetings) and developing the website with the founder.