

# Justin “Avery” Chan

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## EXPERIENCE

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### MAterials Simulation Toolkit Machine Learning (MAST-ML)

Member

Madison, WI  
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

Developer Intern

Chicago, IL  
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

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### University of Wisconsin-Madison

B.S. Major in Computer Science | B.S. Major in Data Science

Major GPA: 3.95 | Cumulative GPA: 3.71 | Dean's List 2 semesters

Madison, WI  
August 2019 – May 2022 (expected)

- *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
- *Current Coursework:* Software Engineering; Introduction to Human-Computer Interaction; Introduction to Computer Networks; Genetics in the News; Introduction to Data Modeling II

## SKILLS

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

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

## PROJECTS

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

- **Lightbulb:** Created a tool to connect people of different talents looking to work on projects. Competed in 2021 Transcend Competition (**React, Node.js, Express**).
- **Personal Website:** Set up my website using Jekyll and wrote python scripts to scrape GitHub (**Jekyll, Liquid, Python**).
- **Blindwrite Clone:** Created a web app that helps users avoid constant self-editing (**plain HTML, CSS, JavaScript**).
- **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**).
- **Spotify Data Analysis:** Analyzed and reported on Spotify song data from Kaggle (**R**).
- **Just-Read-Less-Features:** Forked a chrome extension that standardizes the styling of online articles for daily use (**JavaScript**).

## EXTRACURRICULAR ACTIVITIES

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- **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 about 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**).