



**Justin ‘Avery’ Chan**  
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Bachelor of Science - Computer Science  
University of Wisconsin-Madison

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## EDUCATION

### University of Wisconsin-Madison | Madison, WI

Sept 2019 - Present

Bachelor of Science - Computer Science

**Relevant Completed Coursework:** Advanced Programming in Java; Discrete Mathematics; Computer Engineering; Applied Statistics for Engineers; Introduction to Artificial Intelligence; Machine Organization and Programming;

**Current Coursework:** Introduction to Operating Systems; Introduction to Algorithms; Data and Algorithms: Ethics and Policy; Introduction to Data Modeling

### Huron High School | Ann Arbor, MI

Graduated June 2019

International Baccalaureate Programme

## PROFESSIONAL EXPERIENCE

### Team Member, University Housing | Madison, WI

Sept 2018 - Dec 2018

Responsibilities included customer service, food preparation, and resource management.

### Member, MAterials Simulation Toolkit – Machine Learning (MAST-ML)

Spring 2019 - Present

Working under Dr. Ryan Jacobs from the University of Wisconsin-Madison Computational Materials Group. Developing the MAST-ML tool, an open-source Python package, by debugging, code refactoring, and building additional functionality such as removal of data twins to increase model performance and integration of the gplearn python library. (**Python**)

## SKILLS & LANGUAGES

**Programming Languages:** Java, Python, HTML, CSS, Javascript (Typescript, Google Apps Script), C, R

**Software:** Git (CLI), React.js

## EXTRACURRICULAR ACTIVITIES

### Clubs

**Co-Leader, FoodShed (Coding for Good):** Creating an app for the club FoodShed that keeps track of various locations on the UW campus where free (surplus) food can be picked up using the frameworks Ionic and Angular (written in **Typescript, CSS, and HTML**) to create native apps for iOS and Android.

Fall 2019 - Jun 2020

**Member, AI Club: Deep Learning** Subgroup: Learning the basic principles of deep learning in close study groups; **Causal Architecture** Subgroup: Theoretical approach of natural and artificial intelligence through research papers.

Fall 2019 - Present

### Coding Competitions

2018 - Present

**ICPC:** Took part in UW-Madison’s International Collegiate Programming Contest although did not make the team.

(Intermittently)

**Other:** MadHacks, SVSU Programming Competition

## PERSONAL PROJECTS

### Current

**“Demovate”:** Working to create a collaboration tool to connect people looking to work on projects. Creating the website with the MERN (MongoDB, Express, React, Node) stack. (**Javascript: MERN Stack**).

Jan 2021 - Present

### Larger Scale

**Handwritten Digit Classifier:** Simple Neural Network with Backpropagation (**Java**).

2018 - 2019

**“Wellness” App:** Creating an app to provide a space to record daily events and improve mental wellness using Ionic and Angular to develop a native app for both iOS and Android (**HTML, CSS, Typescript**). Received funding from Burgess Institute.

Winter 2019 -  
Summer 2020

### Smaller Scale

**Blindwrite Clone:** Clone of the online web app “Blindwrite” (**HTML, CSS, Javascript**).

2019

**Term Classification:** Use of the Google Cloud API to classify various terms into categories.

2019

<b>Google Forms Addon:</b> Google forms addon to automate a psychology department workflow ( <b>Google Apps Script</b> ).	2019
<b>Virus Spread:</b> A program to demonstrate the spread of an infectious virus under various conditions through an animated simulation. ( <b>HTML, CSS, Javascript</b> ).	2019
<b>Todo App:</b> Developing a todo list application with JavaFX to experiment with creating productivity software. ( <b>Java, CSS</b> )	Summer 2020
<b>Neural Network:</b> Rework of Handwritten Digit Classifier project with a focus on the mathematics of the problem in preparation of machine learning class. ( <b>Python</b> ).	Summer 2020