

Victor Ma

victorjma@gmail.com | 1-343-558-8883 | [linkedin/victorma](https://www.linkedin.com/in/victorma) | [github/bestmustard](https://github.com/bestmustard)

EDUCATION

Computer Science (Specialist), Mathematics (Major), Statistics (Minor) Toronto, ON | 2024 (Projected)
UNIVERSITY OF TORONTO, ST. GEORGE CAMPUS

Coursework: Artificial Intelligence; Algorithm Design and Analysis; Software Engineering; Data Structures and Analysis; Probability, Statistics and Data Analysis; Software Tools and Systems Programming; Software Design

WORK EXPERIENCE

AMD | DESIGN VERIFICATION INTERN

Markham, ON | May 2022 – April 2023

- Wrote a system of scripts using **Ruby, Python, and Bash** to parse 17GB of **Perforce** workspace data, returning a detailed list of files and their use in testing; allowed for deletion of depreciated test data, freeing ~**36%** disk space for every workspace created under the Display IP team.
- Spearheaded overhaul of **test automation** processes; revised the **Perforce** file structure for test data allowing for faster workspace creation, and smoother transition between projects by linking tests used in previous projects.
- Used **Perl** and **Ruby** scripting to automate merge conflict resolution processes, reducing manual steps by ~**67%**.
- Improved QOL, fixed bugs, and added functionality for the primary manual verification tool used by Display IP.
- Devised **Ruby, Python, Bash, Verilog** scripts to automate file transfer, display capture viewing and test verification.
- Maintained and improved functionality for internal **Vue/React/Express** website used by **90+** engineers.
- Worked closely with senior engineers to debug failing tests and cover points using UVM methodologies.

PROJECTS

DRONE FLIGHT PLANNER

REACT, JAVASCRIPT, NODE, EXPRESS, RESTFUL APIS, AGILE

A full-stack desktop application developed for the U of T Aerospace Team in order to conveniently plan drone flights. Allows user to choose drone sites using an interactive map (Google maps API) and leverages a variety of APIs to fetch airspace, aerodrome, and weather information and store it locally in an SQL database.

PYTHON SALARY PREDICTOR

PYTHON, OOP, DATA ANALYSIS, ML/AI

A Python implementation of the Naive Bayes classifier ML model. Processes the 1994 US Census data and predicts salary based on precursors such as race, gender, etc. and evaluates bias and fairness in the model.

BATTLESHIP SOLITAIRE SOLVER

PYTHON, AI ALGORITHMS

A Python program to solve Battleship Solitaire puzzles as a constraint satisfaction problem, using backtracking search and arc-consistency enforcement algorithms.

TECH CONFERENCE SIMULATION APP

JAVA, JAVAFX, SQL, OOP

A desktop application used to simulate a tech conference with speakers, attendees, and organizers. Features a log-in system with credentials stored in a MySQL database, a messaging system, and an intuitive JavaFX UI allowing for real-time interaction between users.

DIGIT CLASSIFIER

C, BASH, SUPERVISED ML, UNIX

A C implementation of the k-nearest neighbors algorithm, uses Unix piping/filtering to process a training set of 10000 images and accurately match 94% of images of digits to their labels in a 2000 image sample.

SKILLS SUMMARY

Languages: Python, Java, C, C++, Bash, Ruby, R, JavaScript, HTML/CSS, SQL

Technology: Git, Perforce, Node, Express, Electron, React, PostgreSQL, Ubuntu, Linux VMs, Microsoft Office

AWARDS/ACHIEVEMENTS

Top 25% on Canadian Computing Competition 2019

School Champion of Sir Isaac Newton Physics Exam 2019