# **Michael Ilao**

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**EDUCATION**

**McMaster University Hamilton, ON**

*B.Eng. in Software Engineering 2017- 2023*

* Dean’s List 2018-2023, Top 10 in Impact Engineering Showcase 2018.

**WORK EXPERIENCE**

**Independent Software Contractor Toronto, ON**

*Full Stack Developer 2021 - Present*

* Developed a **React** Web App to manage a retail company’s internal inventory and sales system, with configuration to support multiple users and companies.
* Collaborated with backend developers to create an API for integration of frontend and backend
* Developed **Express.js** backend with **SQL DB** and hosted on IIS Servers.
* Integrated 3rd party API’s for an RFID system to keep track of physical inventory and live pricing API to update prices daily.
* Delivered updates and features on schedule, and debugged production issues to maintain 24 hour uptime.

**MHIRJ (Co-op) Toronto, ON**

*Application Developer 2021 – 2022*

* Managed **Azure** Services and DevOps Repos, created and deployed app services using **Docker** and Azure Pipelines.
* Architected, designed, and developed internal SPA **React-Redux** and **Python Flask** web tools within a team of 4 developers.
* Overhauled existing tools to optimize **SQL** queries by 80% on tables with 2M+ records.
* Lead migration of on-premises services to **Azure** environment with network specialists.
* Integrated **Okta** and SSO into **.NET** and **React/Flask** apps.

**Todotoronto (Internship) Toronto, ON**

*Full Stack Developer 2020*

* Developed an E-commerce web app using **React-Redux**, using an **Express.js** RESTful API backend and **MySQL** database.
* Collaborated with a team of 5 developers using **GitLab** agile boards for managing sprints and software development.
* Implemented CI/CD pipelines for production and testing environments.
* Implemented payment solution using **Stripe.**js
* Collaborated with design and marketing teams to create new features and UI’s using **Figma**.
* Successfully launched [whatstudu.com](https://www.whatstudu.com/) beta to over 1000 users.

**CGI (Co-op) Toronto, ON**

*Project Control Officer 2019 – 2020*

* Utilized **Jira** for progress tracking of on-going projects and simplified IT ticket submission by 50% by creating an automated process using **Python** and **Selenium**.

**PROJECTS**

**AI Board Game -** [**GitHub**](https://github.com/michaelilao/aiboardgame) **McMaster University**

*Software Engineering Capstone 2022 – 2023*

* Lead a team of 4 engineering students using software development practices to design, develop, and test a multi-agent reinforcement learning system capable of simulating board games to find unfair strategies and bugs in the game rules, in order to expedite the testing process of the board game.
* Developed a system using **Python** to simulate 100K+ simulations of a board game to analyze winning strategies and common patterns and trained on **Digital Research Alliance of Canada** computer cluster.
* Used **Tianshou, gymnasium,** and **pettingzoo** to implement multi-agent reinforcement learning to simulate multiple AI players per game.
* Created a visualizer to analyze 100+ simulations simultaneously using **React.**

**SKILLS**

**Languages:** JavaScript, Python, SQL, Java

**Tools and Frameworks:** React, Redux, Node.js, Express, Selenium, Flask, MySQL, MSSQL, GitHub**,** GitLab, Azure DevOps, Azure Services, Docker,