

# MICHAEL VYTILINGAM

FULL STACK DEVELOPMENT + MACHINE LEARNING

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## Skills

**Languages:** Python, Go, TypeScript, JavaScript, C++, SQL, MATLAB, HTML5, Sass

**Front End:** React, Redux, Vue, Electron, JEST, Enzyme, Webpack, Babel, Lottie, Figma, Gatsby, Apollo GraphQL

**Back End + Infrastructure:** Express, Flask, AWS S3, Firebase, Docker, Azure DevOps (Pipelines), CircleCI, AWS EC2

**Data:** PostgreSQL, MongoDB, TensorFlow, Keras, YOLO, Microsoft Cognitive Services (LUIS), Elasticsearch

## Experience

### CRYPTONUMERICS / Full Stack Developer Intern

JAN 2020 – PRESENT

- Building and shipping new features for CN-Protect, a cross-platform Electron app for dataset privacy protection
- Owner of internal report generator service (Java) to be consumed in CN-Protect and future applications
- Creating user stories (Figma), building out UI/UX for upcoming web-based enterprise application (React)
- Practicing test driven development in order to prevent avoidable regressions

### UNIVERSITY OF WATERLOO / ML Research Assistant

SEPT 2019 – DEC 2019

- Trained real-time, object detection model of kitchen items using Darknet's YOLO for pasta-cooking robot.
- Increased model's pan detection accuracy by 28% by introducing more training data and improved labeling

### GRAIN DISCOVERY / Software Engineering Intern

MAY 2019 – AUG 2019

- Utilized React, Redux, DeckGL and Express to build Grain Discovery's commodity trading platform
- Created diverse user stories for UI/UX to cater to wide range of demographics in agricultural business industry
- Designed concise, well-tested functional components with emphasis on reusability and maintainability
- Incorporated shell scripts, and re-configured builds in order to decrease front end build time by 23%
- Practiced agile and scrum methodologies in a fast-paced pre-launch startup environment

### ENGINEERING.COM / Software Engineering Intern

SEPT 2018 – DEC 2018

- Worked extensively in Vue, Vuex, Fabric.js, Go and MySQL on ProjectBoard, a project collaboration platform
- Improved internal analytics page with useful data visualizations to coincide with business requirements
- Wireframed, implemented and user tested new home and user profile pages (Figma, A/B Testing, Hotjar)
- Performed automated end-to-end and unit testing using JEST, improving test coverage from 13% to 78%
- Maintained documentation of services and libraries to decrease onboarding time of new team members

## Projects

### PROJECT ROLLOUT

ONGOING

- A platform for matchmaking gaming teammates based on non-traditional features, such as their hero preferences, their likeliness to tilt, and feedback from previous matches.
- Technologies: React (TypeScript), Figma, Go, MongoDB, Discord OAuth2, Discord Bots

### HANDWRITTEN SUDOKU

APR 2020

- Classic Sudoku, with the ability to handwrite digits. CNN trained on MNIST dataset with 98.5% accuracy.
- Technologies: TensorFlow, Keras, React, Flask

## Education

### UNIVERSITY OF WATERLOO / Mechanical Engineering (BaSc)

SEPT 2017 – JUN 2022

- Cumulative GPA: 83%

### COURSERA / Machine Learning (Stanford) - Andrew Ng

JAN 2020 – MAR 2020

- Linear/Logistic Regression, Neural Networks, SVMs, Anomaly Detection, System Design