# Tyler Pharand

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portfolio: **tylerpharand.github.io**

## Experience

### Software Developer (Research and Data)

April 2019 – April 2020

Sensibill Inc., Toronto

- Improved the accuracy of our AI engine in extracting data from pictures of paper receipts. Wrote and maintained algorithms which processed the outputs of our neural network and OCR engines.
- Built a REST API for an in-house Optical Character Recognition (OCR) service we built, which was later deployed as a microservice.
- Developed the front-end of a web application for building datasets using React and Meteor. Additionally, developed back-end scripts for aggregating and storing data in Postgres and S3.
- Developed a wrapper around our extraction engine and dockerized. Converted engine into autoscaling microservice and deployed to AWS using Infrastructure as Code.
- Performed load-testing on microservices to ensure they will be able to scale to meet peak loads.

## Education

### Bachelor of Engineering, Electrical

June 2018

McMaster University, Hamilton

- Capstone - 2nd Place, Electrical Engineering.
- Specialized in image processing and power generation.

## Projects

### GIFME

iOS Application

- Camera application which creates animated GIFs of people in the frame using a semantic segmentation model.
- Ability to export GIFs to Snapchat through the Snapkit SDK.

### NAV X (Engineering Capstone)

Hardware

- POC for augmented-reality assisted GPS navigation.
- Hardware sensors were paired with the Google Maps API to overlay route information onto a video feed from the vehicle.
- Used OpenCV for certain image processing tasks, such as lane detection.

## Technical Skills

**Languages**

- Node.js (Advanced)
- Swift (Novice)
- Java (Novice)

**Web Frameworks**

- React
- Express

**Backend**

- AWS Infrastructure
- IaC with AWS CDK
- CI / CD with Codeship
- MongoDB
- PostgreSQL

**Misc**

- TypeScript
- Git
- Docker
- Bash / shell scripting