

# Shardool Patel

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## Skills

- Proficient at Java, Python, C/C++ & Javascript, Go
  - Experience with SQL, NoSQL databases
  - Full stack experience React, HTML, CSS, Javascript, Node.js
  - Basic Machine Learning Knowledge (Regression, Neural Networks & SVN Models)
  - Experience with C & Python programming of Microcontrollers.
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## Experience

NOVEMBER 2018 - PRESENT

### **Autonomous Robotic and Vehicle Innovations, McMaster University -Software Team, Developer**

Implemented serial communication to send commands to AGV (Automated Guided Vehicle). Currently working on implementing Object Vision to make AGV follow a person. Following scrum methodology to design, develop and test automation in vehicles.

MAY 2017 - SEPTEMBER 2017

### **Oshawa Power and Utilities, Oshawa ON - Summer Intern**

Optimized procurement and inventory management software by clearing corrupted data. Created inventory reports and documented various procurement procedures. Automated data entry using VBA scripts.

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## Projects – [startsUp.github.io](https://startsUp.github.io)

### **TrnTable** - [trntable.live](https://trntable.live)

A web app for hosting/ joining collaborative music sessions. (React, Javascript, CSS, Node.js, NoSQL, HTTP, WebSockets) Implemented modular React UI components based on vector designs. Implemented and deployed Node.js express server with oauth2 authorization flow for Spotify user integration. Designed custom NoSQL database schema (firestore) to store and update session information across all users. Integrated Spotify API to allow users to see their library, play music and create playlists. Put fault tolerances in place to ensure system functionality.

### **DriveSafe**

Route Finder that avoids accident-prone zones (Java, Javascript, JavaFX, API Integrations, XML, JSON) Used JavaFX, WebView to implement UI in Java. Implemented Dijkstra's algorithm with OpenStreetMaps data points to find the shortest and safest routes for users. Implemented rendering of routes with Google Maps interface. Lead team of 5 to deliver a complete product by creating subtask and making sure deadlines are met.

### **Node Messenger** - [github.com/elemaryo/NodeMessenger](https://github.com/elemaryo/NodeMessenger)

Web chat app. (React, Javascript, CSS, Node.js, NoSQL) Implemented firebase authentication service. Worked with a team member to design a custom NoSQL database to serve chat messages in real-time. Created UI components using React and CSS.

### **OLO** - [github.com/startsUp/OLO\\_JavaFX](https://github.com/startsUp/OLO_JavaFX)

A re-implementation of the iOS game [OLO](#) in Java. Created a 2D physics engine with collision support in Java. Utilized Object-Oriented programming to develop and handle the game state.

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## Education

SEPTEMBER 2016 - APRIL 2020

### **McMaster University, Hamilton ON**

Software Engineering & Embedded Systems - 3.9 GPA  
Dean's Honor List, 2016 & 2017