





MATHURAN SADAGOPAN

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SKILLS

Programming Language

JavaScript, Java, C++/C, Node.js,
Python, Kotlin, C#

Frameworks

React.js, Redux, Vue.js, Vuex, Android,
Java Spring boost, UWP

Technologies

Firebase, AWS Unity

EDUCATION

BEng of Computer Engineering (CO-OP) | McMaster University | SEPT 2017- APRIL 2021

EXPERIENCE

Software Engineer Intern | Microsoft

May 2020 – Aug 2020

- Using native Android Java, developed, and designed 3 new features for improving Teams call experience
- Created dynamic and stateful components that complied with Microsoft and Android accessibility guidelines
- Contributed to a POC feature for open source project called Power Toys. A Windows power tools app
- Developed POC in a C# UWP application which Interoped with low level win32 C++ API's to perform color picking

Full Stack Developer | Ellis Don

May 2019 – Aug 2019

- Improved productivity for 100's in the construction industry by building online tools for streamlining workflows
- Created responsive and stateful components such as form fields and dashboards
- Built the frontend using react.js and redux. Backend services was Go or Java Spring Boot

Web Dev Intern | Outside the Box

May 2018 – Aug 2018

- Applied SEO and improved website load time to improve website traffic, and audience retention.
- Used Google Analytics and Hotjar to debug design issues by analyzing data and understanding heatmaps

President of the Woodlands Robotics Club

Sept 2016 - June 2017

- Led the design, electrical and programming aspects of FRC and VEX robotics teams and meetings
- Organized events as well as finance for the club, raising over \$15 000 in funds

PROJECTS

IoT Garden Gnome - Firebase, C, React.js, Express.js

<https://github.com/saamirt/IOT-Garden-Gnome> | **Sept 2019**

- Designed an automated gardening system built on the NodeMCU, which measures soil and air temperature, soil moisture, and sunlight to determine the best time to water the garden while displaying all the information online

McMaster Image Decompressor – Verilog, Altera DE2

| Oct 2019

- Designed, implemented and verified a complex integrated digital system using 1000's of transistors, for decoding a custom picture format called McMaster Image Compression 13 (. mic13) using Verilog, Quartus and Model SIM
- Used UART and SRAM to read and store compressed image data which was then decoded and displayed over VGA

Whack-A-Mole AR - Unity, C#

<https://github.com/Vithop/Wack-A-Bok> | **June 2018**

- Integrated googles' AR core into a Unity game where players throw hammers at Moles that pop out of the floor

DELTA Hack IV: Muscle Gesture Control Interface - C#, C, Arduino

| Jan 2018

- Created a simple interphase between neural impulses in the arm to communicate with an Arduino
- Utilized the Myo armband's EMG sensors, 9 axis gyroscope and motion sensors, our team developed a gesture interface to a 4x4x4 LED cube