# 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 Development Engineer | Amazon**                                    **June 2021 – Present**
- Analyzed the resiliency of our services in preparation to Peak Sales events and improved in areas needed
- Audited the cost of services used by our team and determined that $80,000/year could be saved removing some
- Created a stress tester in order to determine how our services latency and error rate is affected under peak load

**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

**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

**Siren Sense** – React Native, Python, Tensor Flow                                    **| Jan 2021**
- Designed an audio detection app for allowing sound to passthrough headphones when alerting noise is detected.
- Used React Native to develop the front end and used Tensor Flow libraries to develop the audio detection model

**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

**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, and 9 axis gyroscopes to interface hand gestures to a 4x4x4 LED cube