Nishanth Balamohan

Contact Information

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Education

McMaster University, Hamilton, Ontario **September 2014 – May 2019**
Bachelor's of Engineering - Software Engineering (Embedded Systems Co-op)

Skills Summary

Experienced: Java, Python, SQL
Familiar: NodeJS, C++, C#
Software and Technology: Git, Linux, TFS, Microsoft Hololens, Matlab, Simulink, Flask, Spring, Hibernate, Unity, WildFly, Maven, Android Studio, Arduino, Autodesk Inventor, Vuforia

Work Experience

Software Developer at **Giesecke & Devrient** Vaughan, ON **June 2019 – Present**

- Developed an internal build deployment tool using Java, Maven, Spring, Hibernate, and MySQL
- Used REST and SOAP calls to query for various builds and artifacts on TFS (version control)
- Architected of the deployment process of the build tool to efficiently query and increase reproducibility of builds and significantly improved build times
- Migrated legacy codebase to improve performance, and maintainability

Automation Developer Co-op at **IBM** Ottawa, ON **January 2018 – April 2018**

- Tested the Planning Analytics web app by creating automation scripts with NodeJS and Intern
- Developed an internal tool using Python, Flask and SQLite to verify the statuses of tests
- Designed and coordinated migration from RTC to Git and revamped the existing documentation

Developer Co-op at **Royal Bank of Canada** Toronto, ON **August 2017 – December 2017**

- Designed and implemented a XML to JSON converter to enable the visualization of previously inaccessible data for executive comprehension
- Wrote test scripts using Robot Framework, Python, JavaScript and Selenium WebDriver
- Developed test cases, achieving extensive code coverage using HP ALM, RIDE and JIRA

AR Developer at **McMaster University** Hamilton, ON **June 2017 – August 2017**

- Launched interactive educational tools to simplify and enrich sophisticated content and syllabi
- Developed a real time media augmentation of a textbook to drive student retention
- Wrote programs using C# and used the Unity game engine creating an application for iOS, Android, and the Microsoft Hololens

Projects

SwarmBot **April 2019**

- Developed a swarm of autonomous boats that carry out measurements over large bodies of water
- Wrote a C++ library to allow the control of the motors of each unit in the swarm
- Designed and constructed a boat with an ATMEL 328P Microcontroller with motors and sensors
- Visualized the physical properties of the water in a heatmap using matplotlib and Seaborn

Blue Lines: Crimes in Chicago **April 2016**

- Designed a data science project that studied crime in Chicago using government datasets
- Experimented with algorithm choice for optimal performance with large datasets
- Produced a clear visualization that revealed the geographic correlation of crime and poverty
- Used technologies including Python, pandas, numPy and sqlite3

Extracurricular Activities

Google IgniteCS Mentor **May 2017 – August 2017**

- Designed activities using Elm for students in nearby schools to learn about computer science
- Mentored hundreds of students from grade 6-8 during their Elm programming workshops

MAC Formula Electric **September 2016 – April 2017**

- Member of the Control Systems Team and the Fault Tolerance Team
- Collaborated with the Electronics team for closed loop control and monitoring vehicle subsystems
- Developed simulations using the Simulink environment from MATLAB