

# Janarth Kumaresan

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## Work Experience

### **Software Engineer Intermediate**

**Jan 2019 - Sept 2020**

Thales Rail Signalling Solutions, North York, ON

- Created modular web components using Polymer library for reuse among various product lines
- Built framework to easily create aesthetic transit guideway drawings
- Interviewed TFL (Transport For London) Operators to uncover key areas of UI improvement
- Participated in UI design sessions to modernize and improve usability of legacy application
- Used PixiJS to build a beautiful, modern interface for our existing applications
- Improved security by removing sensitive data exposed by application
- Gained experience with: Polymer, Typescript, C++11, Jenkins, Git Extensions, i18n, Unicode

### **Software Analyst - Next Gen HMI Web Developer - Contractor**

**Feb 2018 - Sep 2018**

Thales Rail Signalling Solutions, North York, ON

- Pioneering the development of a Web Application to supersede existing Product line (Next Gen HMI)
- Developing a responsive and dynamic Front-end application using Angular, SVG animations and CSS3
- Innovating UI/UX changes to improve customer experience and appeal
- Transformed the legacy application using the Dracula color scheme
- Gained experience with Webstorm, Git, XSL, XSD, ServiceMix

### **Software Analyst - C++ - Contractor**

**June 2017 - Jan 2018**

Thales Rail Signalling Solutions, North York, ON

- Contributed to Software development of client facing projects in Santiago (Chile), Doha (Qatar), and Singapore
- Carried out architecture changes to improve efficiency using Ruby
- Investigated bugs in a large code base and delivering appropriate solutions
- Migrating functionality across projects
- Proposing designs and implementing those designs to meet customer requirements

### **Software Engineer - Virtual Reality Content Developer - C++11**

**Aug 2015 - May 2017**

Sulon Technologies (*Augmented Reality Startup*), Markham, ON

- Crafted core components of Virtual Operating System using Ogre3D game engine
- Development experience with Unity game engine and C#
- Developed hand gesture detection system with OpenCV (sole programmer)
- Solved key niche challenges for OS development with WinAPI
- Built Leap motion prototype for Virtual OS
- Implemented Kalman Filter and prediction for tracking
- Familiar with both open and closed engineering problems in Virtual Reality

### **DB2 Software Test Associate**

**May 2013 - Aug 2014**

International Business Machines (IBM) (*Co-op*), Markham, ON

**Jan 2015 - Feb 2015**

- Worked under the supervision of two managers, succeeded with multiple diverse responsibilities
- Managed over 100 Linux and AIX development machines
- Gained experience writing PHP/JQuery/Javascript scripts for QA infrastructure
- Implemented rapid infrastructure solutions in response to new projects (including one major transition)
- Hired again part-time after co-op term ended, worked during school, developing infrastructure improvements

## **Summary of Skills**

- Fluent in the object oriented programming paradigm using C++11
- Affinity for Mathematical problems demonstrated through challenging independent projects at Sulon
- Experience Gained at Thales: C++11, PIXI, Polymer, Web Components, Git, Jenkins, Angular, SVG, CSS3, Typescript, Ruby, Servicemix, i18n
- Experience Gained At Sulon : C++11, C#, Ogre3D, Unity, OpenCV, Leap, Kalman Filter, Python, Gnuplot, SVN
- Experienced Gained at IBM: Perl, Javascript, PHP, SQL, DB2, JQuery, ClearCase, Unix tools
- Self Learning: Python, Node.js, Android Development, Batch, FBML

## **Education**

### **Bachelor of Engineering - Software Engineering (B.Eng)(Co-op)**

**Sept 2010 – April 2015**

McMaster University, Hamilton, ON

- Capstone: “Pill Dispenser” - Worked in a team of 4 as the Software Lead for the automation of pill dispensing within an elderly care facility. Responsible for implementing front-end HTML admin client and backend PHP server.
- Large System Design Project: “Secure Messenger” - Developed a secure messaging application for small businesses in a team of 4. Worked primarily on android application development.

## **Volunteer Experience**

### **Pathways to Education Program - Tutor**

**Oct 2018 - June 2019**

Youthlink, Scarborough, ON

- Spend time with students on a weekly basis helping them work through challenging school work
- Assist with the subjects I'm strong at: mathematics, physics and English

### **Learning and Fun (LAF) After School Mentor**

**Oct 2014 - Feb 2015**

Community Volunteer Action, Hamilton, ON

- Assisting and mentoring at risk children in grades 1 to 4
- Provide mentoring, homework assistance and teach financial literacy skills to at risk children

### **Visiting Volunteer**

**Jan 2014- Jan 2015**

Canadian National Institute for the Blind (CNIB), Toronto, ON

- Assisted visually impaired individual weekly with daily tasks
- Maintained professionalism and confidentiality throughout volunteering term
- Strengthened communication skills in regards to being respectful and clear
- Learned the importance of accessibility in all branches of software development