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EDUCATION

Bachelor of Engineering, **September 2012-April 2017**

Computer Systems Engineering (Co-op Option)

Carleton University, Ottawa, Ontario

- Graduation date: 2017
- CGPA: 9.69/12.0

PROFESSIONAL DEVELOPMENT

The Web Developer Bootcamp **September 2017-Current**

Udemy (MOOC Platform)

- Developing a familiarity with several tools and technologies including HTML5, CSS3, JavaScript, Bootstrap, JQuery, NodeJS, ExpressJS, MongoDB, REST, etc.
- Working on completing multiple web application projects including YelpCamp

SKILLS AND EXPERTISE

- Programming languages: **Python**, **Java, C, C++, Assembly, Perl, MATLAB**
- Web development: **HTML**, **CSS**, **JavaScript, JSON**
- Familiarity with Unit testing: **JUnit**
- Operating Systems: **Linux**, **Unix**, **Solaris**, **Windows**
- Experience in using Version Control Software and code review tools: **Git** and **Gerrit**
- Basic operating system principles: **Processes**, **threads**, **mutual exclusion**, **deadlock**, **starvation**, **concurrent programming**, etc.
- Software Design skills: **Object Oriented** design/analysis and **Design Patterns**
- Experience in using **UML** for communicating, constructing, and validating the software throughout the cycles
- Experience working in an **Agile Development** environment

WORK EXPERIENCE

Tools Developer (Co-op) **February 2016-August 2016**

Ericsson, Kanata, Ontario

- Developed DRX (Discontinuous Reception) Tool to monitor UE's state by parsing log files for traces/signals using **Python** and plot the information in a webpage using **HMTL** and an open source **JavaScript** plotting library
- Developed a graphical user interface tool using **Java** that summarizes multiple internal Wiki pages that contain information on internal scripts and fetch all the relatable information on previous uses of the script

Software Developer (Co-op) **September 2015-January 2016**

Ericsson, Kanata, Ontario

- Developed and debugged **Python/Java** code for the EMCA (Ericsson Multi Core Architecture) Debugger targeted towards Ericsson's Radio Base Station for LTE
- Refactored outdated **Python** code for new releases of the debugger on a **Linux** system
- Worked in an **agile** team and participated in daily **scrums**
- Used **Git** to commit completed tasks to the master repository, solving merge conflicts and modifying the committed code if needed following the code reviewer's guidelines on **Gerrit**

5620 SAM Global Technical Support (Co-op) **May 2014-December 2014**

Nokia (formerly Alcatel-Lucent), Kanata, Ontario

- Supported and provided remote technical support for the 5620 SAM network management platform and associated network elements
- Interfaced, developed and maintained strong relationships with external and internal remotely to troubleshoot/answer questions
- Accessed remote sites, reviewed log files, coordinated the duplicating or testing of the issue, gathered traces, logs, files for critical support
- Assisted with debugging complex product installations, resolved complicated product problems by applying both established procedures and creative alternatives
- Built a simple web interface tool using **PHP**, **MySQL**, **HTML**, **CSS**, and **JavaScript** to help coworkers book onsite Servers/Databases to avoid confusion and overlap of bookings

APPLIED PROJECTS

Smart Home System (Graduation Project) **September 2016-April 2017**

- Member of a team of 3 aimed to develop a smart home system to provide home owners with feedback and information through monitoring certain areas of their home and taking actions automatically or alerting the user and giving them the ability to access their home remotely
- Individually developed a hybrid mobile application using **Ionic Framework**, **HTML**, **CSS**, **JavaScript**, **REST API, JSON** that provides users with convenient control of their homes by providing services such as controlling light, setting/getting temperature and humidity levels, messaging system between the users, security through a camera, etc.
- **GitHub Project Code:** https://github.com/mohamedtosman/Smart-Home-Mobile-App

3rd Year Software Project **September 2016-December 2016**

- Worked in a team to develop the back-end and front-end for a packet routing system in **Java** that inhibits the Depth First, Breadth First, and Flooding routing algorithms
- Made use of the AWT Packages and MVC pattern to implement the user interface
- Used **GitHub** for revision control and source code management
- **GitHub Project Code:** https://github.com/mohamedtosman/Packet-Routing

Programming in Java **January 2015-April 2015**

Carleton University, Ottawa, Ontario

- Worked in a team to develop an electronic voting system in **Java** to strengthen core concepts including a Client-Server model, graphical user interfaces, thread synchronization, database operations using Jackcess Java Library, and JUNIT testing

Programming in C **January 2015-April 2015**

Carleton University, Ottawa, Ontario

- Worked independently using **C** to develop programs including a console-version of the Snakes & Ladders and Battleship games to strengthen core concepts including library functions, arrays, two-dimensional arrays, I/O and file I/O
- Worked independently using **C** in a **Linux** environment to develop a variation of the Readers and Writers problem
- Worked independently using **C** in a **Linux** environment to implement a system using the Client-Server paradigm where communication occurs through an RPC

Programming in Python **September 2012-December 2012**

Carleton University, Ottawa, Ontario

- Worked to develop fundamental concepts including using the **Python** shell for various exercises, media computation to manipulate images, lists, tuples, sets, dictionaries and object-oriented programming

Reverse Engineering Project **September 2012-December 2012**

Carleton University, Ottawa, Ontario

- Worked in a team to develop alternations to an existing product in order to illustrate potential improvements in comparison to previous product
- Illustrated the updated product in a 3D representation using **PRO**/**E** to present it in a professional and a realistic manner