Abhinav Rajaseshan

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SUMMARY

- **Software Skills: C, C++, Java, Android and Verilog.**
- Love to work on projects in teams and work using Scrum (Agile Development) to manage and track progress.
- Experience working in Linux environments and strong MS Office skills.
- Knowledge of Design software (Photoshop & Illustrator) and CAD tools (Solidworks).

PROFESSIONAL EXPERIENCE

System Administrator**,** Electronics and Computing**,** Department of Chemistry, University of Toronto (September 2015 - Present)

- Building a system of humidity and temperature sensors to monitor and detect unfavorable conditions for performing experiments and unsuitable conditions for storage of sensitive equipment.
- **Setup** and **Maintain** the Department of Chemistry **servers**.
- Develop **Drupal** template (theme) to be used to create websites (Cross Browser) for professors and their research groups.

President**,** Skule Dev, University of Toronto (September 2015 - Present)

- Leading and mentoring **multiple software design teams** working on small to medium scale projects.
- Created a learning environment by **organizing weekly seminars** on different topics by inviting student speakers.

Software Engineer Intern**,** ETCON Middle East (Summer 2015)

- Developed and designed **Greeminder** – A personal greeting scheduler. An Android application that schedules greetings on SMS, mail and twitter.
- Used **PHP** and **SQL** (Database) to create an online Mail Client, a Templates API and a database of users.

Personal Projects

- **Swipe10** – Swipe10 is a trackpad driver fix for windows 10. Wrote **algorithm to detect multi-finger gestures** such as three finger swipes and map them to different windows interactions.
- **Saber Wars**- Wrote an algorithm that uses smartphone sensors to map the **phones orientation and location in 3D space** with reference to a point. Used data to control lightsaber Star Wars styled game.
- **Homey** - Homey is an award-winning **home monitoring system** powered by Intel Edison. Features like lights and temperature management can be controlled using either the Android or Pebble App remotely.
- **Sing it Now** – Sing it Now is a client-server combination which acts like a Karaoke machine. Multiple audio streams are transmitted to the local server with a **latency of less than a second**.

EDUCATION

Bachelor of Applied Science and Engineering in Computer Engineering**,** University of Toronto (Expected 2018)

- *Languages Learnt:* **C, C++, Verilog, Assembly**
- *Human Powered Vehicle Design Team*
  - Designed and manufactured steering system and handle bars for Vietza (2014 bike)
  - Built **E-dashboard** which uses an **Android** device to display speed, distance, lights (on/off) and readings from different sensors. This data was collected by an **Arduino** and sent to the App via **Bluetooth**.
- *Course Projects:*
  - Maps – A mapping solution with navigation similar to google maps built on C++ using OpenStreetMap database.
    - Implemented **Dijkstra's algorithm** with **A* heuristic** to find fastest path between two intersections.
    - Implemented **Greedy** with **Simulated Annealing** for **travelling salesman problem**.
  - AI for connect 6. My algorithm performed **better than 80%** of the class.
  - Lego Lathe – A lathe milling machine built with Lego and controlled by assembly code (NIOS II) using Altera FPGA.
  - Capsule Dispenser controlled by Verilog code programmed for the Altera DE1 SoC FPGA.

INTERESTS

- *Love to bike, trek and explore places.*
- Design graphics for Toike Oike – The Engineering Comedy newspaper at the University of Toronto.