DANIEL MIN

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EDUCATION

University of Toronto

Faculty of Applied Science and Engineering   *Sept 2014 ~ Present*

- Pursuing BASc in Computer Engineering
- Received President's Entrance Scholarship
- Relevant Coursework: Operating Systems, Algorithms and Data Structures, Probability, Databases, Software Design, Computer Networks

SKILLS

- **Programming Languages:** C++, C, Java, PostgreSQL (DML, DDL), XML (XPath, XQuery, DTD), Verilog , NIOS II Assembly, HTML, CSS, JavaScript, MATLAB, Python
- **Tools:** Git, Bash, Subversion (svn), Visual Studio, NetBeans, MATLAB, gdb, valgrind, Android Studio, Firebase, Eclipse, Code::Blocks, ModelSim, Quartus, MultiSim, Sublime Text

WORK EXPERIENCE

- **Software Engineering Intern,** Magna International, Inc., Magna Electronics   Brampton, ON
  (C++, C, MATLAB, Python)   *May 2017 ~ Present*
  - Utilized structural and behavioural design patterns to refactor the architecture of software modules for them to have an interface with clearer input/output structure and to efficiently suit different clients' needs
  - Developed a line detection algorithm for the autopark project to efficiently detect parking lines using image processing algorithms. This decreased the processing time of autopark module by 50%
  - Implemented a parking spot detection algorithm using ultrasound data from sensors and line detection algorithm. It was tested in the field, and found to have improved the overall successful parking rate by 10%
  - Tested the autopark state machine and discovered an incorrect stateflow causing bugs in the overall system. Successfully developed a new logic for the state machine and stabilized the system
  - Developed a GUI using Tkinter framework in Python to make automated test runs more convenient to run and to make it easier to visualize and analyze results
  - Used C++ plugin architecture to develop software modules of vehicle features in a flexible and independent manner

PROJECTS

- **Mapping Application (2016)**
  - Developed a user friendly geographical information application that is targeted towards tourists by leading 2 other team members
  - Implemented data structures from C++11 standard template library to speed up computing process
  - Tested the prototype user interface with variety of users and got feedback to make it more user friendly
  - Implemented the shortest path finding algorithm by starting with greedy solution and switching to dijkstra and A* algorithm to improve the performance after iteration of testing
  - Built on top of and implemented additional functions on an already existing code on subversion
- **Resistive Network Simulator (2015)**
  - Programmed a virtual resistive network using C++ and NetBeans
  - Implemented parsing algorithm that takes in resistor information as input and stores them in a linked list
  - Performs functions such as deleting a resistor, printing resistor information, and calculating voltage of a node
  - Used NetBeans debugger, gdb, and valgrind to debug and detect, segmentation faults/memory leaks
- **KESA Application (2016)**
  - Developed an android social application that allows members of the Korean Engineering Students' Association to interact and communicate in Java and Android Studio
  - Implemented the firebase database and API to store and fetch user data
  - Tested the prototype of various user interfaces with users to achieve high user-friendliness
- **Daniel Min Website (2016)**
  - Check out this simple website I made using HTML/CSS at https://dan09781.github.io/