Karn Rahal

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EDUCATION

The University of British Columbia   **Expected May 2019**

Bachelor of Applied Science – Computer Engineering

TECHNICAL SKILLS

Computer Languages	**Tools & Software**	**Boards & Operating Systems**	**Electrical Equipment**
• C	• GitHub	• Arduino	• Oscilloscope
• Java	• Android Studio	• Altera DE1-SoC	• Signal Generator
• Verilog HDL	• AutoCAD	• Microsoft Windows	• Multimeter
• Assembly (ARM)	• AutoDesk Inventor	• Mac OS X	• Breadboard
• HTML	• Quartus & ModelSim		• Soldering Iron
• CSS			

TECHNICAL PROJECTS

Launchpad Audio Controller and Soundboard (UBC)   **March 2017 – April 2017**

Developed in C, Java (Android Studio), HTML, CSS

- Developed a Launchpad that integrated Arduinos, a Raspberry Pi, Apache web server, website, and an Android app
- Designed and developed the Android app that allows users to create sound layouts, play sounds stored on a web server, and update sounds to the physical Launchpad through web server and Raspberry Pi communication
- Soldered a 4x4 LED matrix and programmed it to communicate with a 4x4 button matrix through Arduinos using a radio frequency transmitter and receiver
- Delegated tasks among a team of six to meet a 2.5-week deadline and used GitHub for version control and collaboration
- Considered design, functionality, performance, complexity, and documentation for evaluation

Autonomous Arduino Robot (UBC)   **February 2017 – March 2017**

Developed in C

- Built an autonomous Arduino robot with several functionalities including: line following, object sensing, and remote control
- Implemented hall effect sensors and magnets to coordinate motors and enable the robot's movement
- Programmed a sonar sensor attached to a servo motor to sense objects and detect obstacles and the furthest open distance. This allowed the robot to slow down if needed and readjust to take the optimal path.
- Developed a remote control for the robot using a radio frequency transmitter, receiver, and keypad
- Utilized GitHub to collaborate code in a team of six and developed testing skills from debugging unexpected problems due to the complexity of the integrated code

WORK EXPERIENCE

Staples   **January 2014 – September 2017**

Technology Sales Representative & Technician

- Achieved top salesman on the Staples Delta Technology team
- Received "Inspired Seller of the Month" multiple times due to outstanding sales performance and customer service
- Engaged customers and quickly recognized their needs through conversation and attentive listening to provide a total solution
- Effectively communicated product and tech services information in one-on-one conversation and to small groups
- Trained new hires in sales techniques, excellent customer service, job duties, and retail equipment
- Diagnosed and repaired computer software and hardware issues