Joey **Ah-kiow**

3rd year Electrical Engineering Student

Calgary, AB

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Skills

- **Programming Languages:** C, C++, C#, Java, Python, SQL, MATLAB, embedded programming, MIPS assembly language
- **Development Tools:** .NET Framework, Visual Studio IDE, XCode IDE, IAR IDE, REST API, GitHub, Oracle SQL, PostgreSQL
- **Electrical:** VHDL, Verilog, Modelsim, Quartus, FPGAs, RTL design, digital timing analysis, NI Multisim, LTSpice, lab equipment
- **Embedded Systems:** Arduino, PIC microcontrollers, bare-metal ARM
- **Soft Skills:** problem solving, teamwork and coordination, written and verbal communication, fast learner, critical thinking

Education

University of Calgary — *Calgary, AB*

B.Sc. in Electrical Engineering, Double Minor in Computer Science and Computer Engineering — *Sep. 2018 - Current*

- **GPA:** 3.7/4.0; **Expected Graduation:** May 2023; **Awards:** Dean's List (2019, 2020), P.U.R.E. Award
- **Relevant Courses:**
  - Digital Systems Design: Design, simulation and testing of digital systems using VHDL, Quartus, Modelsim and a Terasic DE-10 lite FPGA board(Project-based)
  - **Other:** Computer Organization, Embedded Systems Interfacing, Principles of Software Development

Work Experience

Canadian Natural Resources Limited(CNRL) — *Calgary, AB*

Data Provisioning Intern — *May 2020 - Aug. 2020*

- Developed and implemented SQL scripts and queries to load data from external sources and correct data integrity(ETL) and manage and maintain relational databases
- Communicated with other teams and business users to confirm data validity, requirements and deployment success
- Developed an application using C# and .NET's ReportingService2010 API to streamline the deployment of SSRS reports
- Developed multiple applications to manage and synchronize Tableau server and Active Directory groups and users using Tableau's REST API, the Npgsql nuget package and .NET's System.Net.Http and System.DirectoryServices

University of Calgary — *Calgary, AB*

Undergraduate Researcher — *May 2019 - Aug. 2019*

- Conducted research to determine the set of parameters that would yield the most accurate output when completing least-squares adjustments for stereo-photogrammetry purposes
- Captured, analyzed and evaluated data for correctness and quality to ensure output reliability

Projects

Adjustable "sound machine"

Course Project — *Jan. 2020 - May 2020*

- The goal of this project was to enhance the functionality of "sound machines" that are commonly used as sleeping aids to improve efficacy and provide users with customizability to increase desirability and expand the user base
- Instead of playing white noise which covers the entire spectrum of human hearing, this project utilized both microphone input and user selection to output the most optimal and desirable sound to mask ambient noise
- This project was not physically finished due to COVID-19 but a MATLAB demo of the product and a report detailing all aspects of the product development were completed

Extracurricular Activities

Zeus Electric Motorsport — *Calgary, AB*

Electrical Engineering team member — *Oct. 2019 - Current*

- Member of the Telemetry sub-team, currently developing an in-house telemetry unit using Arduino to create a point-to-point LoRa module to collect and remotely monitor vehicle data
- Communicating and coordinating with the Mechanical Engineering team to design and verify feasibility of battery packs

Embedded in Embedded(EiE) — *Calgary, AB*

Member — *Sep. 2019 - Apr. 2020*

- Gained skills and knowledge of bare-metal embedded systems using an ARM-based development board
- Developed and debugged user applications for embedded systems using C++ and IAR workbench IDE