**Joey Ah-kiow**

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**Education**

**University of Calgary | Calgary, AB** September 2018 – Present

Bachelor of Science in Electrical Engineering, GPA 3.74 Expected Graduation: May 2023

* Minor in Computer Engineering

**Skills**

**Programming:** Java, Python, C#, SQL, C, C++, Verilog, VHDL, MIPS Assembly

**Hardware:** FPGA, PIC microcontroller, Arduino

**Software:** Intel Quartus Prime, ModelSim, NI Multisim, LTSpice, SolidWorks, GitHub, Power BI, Excel

**Communication:** Design proposals, technical reports, instruction manuals, presentations (large and small audiences)

**Experience**

**TC Energy | Calgary, AB** May 2021 – Present

***Field Data Program Management Intern***

* Supported the Management of the Field Data program by revising official engineering documents, assisting internal and external stakeholders, maintaining and ensuring dataquality, and completing various improvement initiatives
* Developed a new reporting tool adopted by the Pipe Integrity department (~200employees) to automate the escalation of reporting, resulting in 60-70% timesaving for management
* Created and managed various Power BI reports to enable data-driven decision making and improve workflow processes
* Implemented process automations for the Valve Integrity team, leading to improved data quality and efficiency

**Canadian Natural Resources Limited (CNRL) | Calgary, AB** May 2020 – August 2020

***Data Provision Intern***

* Developed and implemented SQL scripts to load, transform, and correct data for internal stakeholders
* Developed two applications using C# and .NET 4.8 to automate (1) the deployment of SSRS reports, and (2) the management of our Tableau server groups and users

**University of Calgary | Calgary, AB** May 2019 – August 2019

***Undergraduate Research Assistant***

* Researched the set of parameters that would yield the most accurate output when completing least-squares adjustments for stereo-photogrammetry purposes

**Projects**

**REJOY Fitness Tracker** January 2021 – May 2021

**Course Project**

*Arduino-based system that measures and stores data such as blood oxygen level, heart rate, and steps taken*

* Developed a fully integrated device that utilized an SD card module, a heart rate and blood oximetry sensor, a rotary encoder, an accelerometer, an RTC, a LiPo battery, an OLED display and a BLE module
* Utilized standard protocols such as SPI and I2C to communicate between the Arduino and the peripherals

**Proximity-controlled buzzer, LEDs, and 7 segment displays** January 2021 – May 2021

**Course Project**

*FPGA system that reads data from a proximity sensor to control a buzzer, LEDs and 7 segment displays*

* The proximity sensor output is read using an ADC, outputted to the 7 segment displays in voltage or distance units, and controls the frequency of a buzzer and brightness of an LED array using PWM

**Relevant Coursework**

**Digital Systems Design:** Design, simulation and implementation of digital systems using VHDL and a Terasic DE10 Lite FPGA board; emphasis on design process, testability and maintainability

**Digital Electronic Circuits:** Fundamentals of digital circuits; Analysis of MOSFET transistor circuits; Design of logic gates and other digital circuit components; Exploration of design considerations and tradeoffs

**Computer Organization:** MIPS assembly language and microarchitecture; Pipelining, and parallelism; Hazards