KAYWAN SANJARI

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EDUCATION

Polytechnique Montréal Montréal, Québec
Bachelor of Electrical Engineering 2019-2023
GPA : 3.37/4 (111/120 credits)
Courses : Object-Oriented Programming (C++), Microcontrollers and Applications, Flight and Engine Control, Digital Control Systems, Avionics Systems (currently), Robotics (currently)

SKILLS

Programming Languages	C/C++, Python, MATLAB, HTML, CSS, JavaScript, VHDL
Design Tools	QNX Neutrino (HIL), SIMULINK, LTSpice, KiCAD, Keil UVision, Vivado, AGI32
Development Tools	Git, GitHub, Azure DevOps, BitBucket, React, ClickUp
Platforms	Linux, Windows, Visual Studio, VS Code, Anaconda, Spyder, Jupyter Notebook

RELEVANT EXPERIENCE

Electrical Engineer Intern - International Mars Ice Mapper mission May 2023 - Aug. 2023
Canadian Space Agency / Agence Spatiale Canadienne *Longueuil, QC*

- Implemented a Python-based image data compression algorithm with bit-plane encoding and object-oriented programming to support the International Mars Ice Mapper mission
- Worked with multiple Python environments in Anaconda using packages such as Numba, NumPy, GDAL
- Simulated Synthetic Aperture Radar imaging in MATLAB using the Range-Doppler Algorithm

PROJECTS

Personal Portfolio Website Sept. 2023 (In Progress)
Personal Project *Montréal, QC*

- Programmed first web application project using ReactJS (with HTML/CSS and JavaScript) and Vite

Battery Management System controlled by an embedded system Sept. 2022 - April 2023
Polytechnique Montréal in collaboration with Rheolution Inc. *Montréal, QC*

- Developed, in a team of six people, a power supply module and charging management system for a Lithium-ion battery controlled by an embedded system
- Designed electrical circuits (USB Power Delivery, PowerPath and others) after analyzing applicables IEC standards.
- Simulated Lithium-ion battery's state of charge on SIMULINK

Google Chrome Dinosaur game on an embedded system Nov. 2022 - Dec. 2022
Polytechnique Montréal *Montréal, QC*

- Developed, in C (Keil Uvision), the Chrome Dinosaur game on an STM32 family microcontroller with LCD screen and controlled with a ultrasonic sensor
- UART communication allowing a multiplayer mode between two microcontrollers through infrared

Touchless automatic sensor garbage bin with telecommunications features Feb. 2022 - April 2022
Personnal project *Montréal, QC*

- Developed, in C++ (Arduino), a garbage bin with automatic opening by hand or by voice detection
- Telecommunication features allowing the embedded system to send an SMS after detecting the bin is full

ADDITIONAL EXPERIENCE

Electrical Engineer Intern - Smart Cities Lightning Conversion May 2022 - Aug. 2022
Énergère *Montréal, QC*

- Design of lighting conversion projects by lighting calculations on AGI32.
- Analysis of data collected on ArcGIS about luminaires concerning the cities and municipalities of Québec
- Realization of several feasibility studies on the choice of luminaires through ClickUp

Electrical Engineer Intern - Reliability of the electricity transmission system Aug. 2021 - Dec. 2021
Régie de l'énergie *Montréal, QC*

- Analysis of reliability standards applicable to the electricity transmission network in Québec
- Drafting of reference documents and analyses in Microsoft office, for transmission to entities subject to the reliability regime