KAYWAN SANJARI

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EDUCATION

École Polytechnique de Montréal *Montréal, Québec*
Specialized Graduate Diploma : **Data Engineering** *May 2025*
Bachelor of Engineering : **Electrical Engineering** | GPA : 3.35/4 *December 2023*
Key courses : Object-Oriented Programming | Image Processing | Industrial Data Exploration (*Ongoing*) | Regression Analysis and Analysis of Variance (*Ongoing*) | Unsupervised Learning and Time Series Analysis (*Ongoing*)

SKILLS

Programming Languages	Python, C/C++, R, MATLAB, VHDL, HTML, CSS, JavaScript
Development Tools	Git, GitHub, GDB, Django, React, Azure DevOps, BitBucket, ClickUp
Data Science Tools	Matplotlib, Seaborn, Pandas, Numpy, Microsoft Excel
Platforms	Linux, Windows, Visual Studio, VS Code, Anaconda, Spyder, Jupyter Notebook

EXPERIENCE

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

- Implemented a multi-look complex image data compression algorithm for Synthetic Aperture Radar in Python, utilizing bit-plane encoding and object-oriented programming.
- Developed a comprehensive dataset using Python data science tools (Pandas, Matplotlib, Seaborn) to analyze the performance of the algorithm on compact polarimetric images under various parameters.
- Technologies used : Python, Anaconda, Git, Azure DevOps, Matplotlib, NumPy, Numba, Seaborn, GDAL.

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

- Conducted the design, analysis and calculations of road LED lightning conversion projects in AGI32.
- Analyzed data related to luminaires from cities and municipalities in Québec on ArcGIS.
- Prepared multiple feasibility studies for luminaire selection using ClickUp's agile tools.

PROJECTS

Yelp Clone Web Application *Oct. 2023 - Ongoing*

- Developed a Yelp clone web application using Django and Python for backend functionality, integrating Yelp Fusion API and Google Places API, and implemented the front-end development using HTML, CSS, and JavaScript.
- Currently expanding the application with AWS (EC2, RDS) integration for data collection and visualizations such as time-based review score plots, not available on Yelp.

Facial Recognition System with TCP/IP Communication in Linux *Oct. 2023 - Dec. 2023*

- Developed a real-time facial recognition system in C++, using an Odroid-C2 to train a face detection model with OpenCV's Machine Learning libraries, which then displays the names of identified individuals.
- Engineered a TCP/IP communication between a server (Odroid-C2) and a client (CentOS 7) for real-time image display and messaging, using cross-compiling toolchains (CMake and Makefiles).

Battery Management System Controlled by an Embedded System *Sept. 2022 - April 2023*

- Collaborated in a team of six to develop a power supply module and charging management system for a lithium-ion battery, controlled by an embedded system.
- Developed, simulated (Matlab/Simulink) and validated a predictive model for the state of charge and discharge of the lithium-ion batteries used.