

# Parsa Jafarian

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## EDUCATION

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### McGill University

Montreal, Quebec, Canada

*B.Eng in Software Engineering Co-op* | GPA: 4.00/4.00

August 2024 – May 2028

- Probability & Statistics, Calculus (1-3), Differential Equations, Digital Logic

## EXPERIENCE

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### Data Analyst

Dorval, Quebec, Canada

*Transport Canada*

January 2025 – August 2025

- Automated and optimized data pipelines by loading Azure Data Lake Storage data into **Databricks** with **Python & PySpark** using **Azure Data Factory**, reducing load on the database, and enhancing security
- Migrated **SAP** reports to **Power BI** by developing paginated reports for marine vessel data in **Power BI Report Builder** using **DAX**, resulting in reduced report generation time and improved data accuracy
- Optimized a Power BI dataset by splitting it into **Dataflows** and modifying **M-code**, aggregating data in **Oracle SQL**, and using **DirectQuery**, reducing load time **from 2 hours to 20 minutes**
- Automated the cancellation of long-running Power BI dataset refreshes using a **PowerShell** script in **Power Automate**, reducing database capacity overload via the **Power BI REST API**

### Embedded System Developer

Montreal, Quebec, Canada

*McGill Formula Electric & McGill Drone Team*

September 2024 – January 2025

- Initiated **ROS2** setup for the new Driverless subteam by building a custom **Docker Image** for containerization, leading to a faster setup for members unfamiliar with **Ubuntu** or **Virtual Machines**
- Accomplished communication between two **STM32** controllers via **CAN & SPI** protocols in **C & C++** while ensuring correct pin alignment through **PCB** design verification
- Trained a **YOLO** model to detect black bins on natural terrain using **Kaggle**-sourced data and an **OpenCV**-generated dataset, achieving **98%** accuracy for drone-based fire detection and extinguishing

### Web Developer

Montreal, Quebec, Canada

*Tail'ed*

July 2024 – September 2024

- Implemented **WebSocket** for real-time communication with **Next.js** server actions, enabling push notifications and reducing server-client data exchange latency from **2 seconds to 100 milliseconds**
- Set up automated unit tests with **Jest** and **Github Actions**, cutting backend development time by **30%** by reducing reliance on slow client-side testing
- Designed and implemented a type-safe backend using **TypeScript**, structuring internship data models to enhance query efficiency and maintainability in **MongoDB**

## SKILLS

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**Programming Languages:** Java, Python, TS (*Fluent*); Bash, C, VHDL (*Proficient*); PowerShell, C++, C# (*Basic*)

**Data Science:** Tensorflow, NumPy, Pandas, Scikit-Learn, Matplotlib, Power BI, Basic R & Matlab

**Full-Stack:** React, React Native, JavaFX, Next.js, Express.js, Flask

**DevOps & Databases:** Azure, AWS, Docker, Git, MySQL, Apache Spark, Oracle, MongoDB, Firebase

**Languages:** Fluent in English, French, Persian; Intermediate in Spanish

## PROJECTS

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**CodeML CN Challenge** *Tensorflow, Scikit-Learn, Pandas, Matplotlib*

[github.com/peizheg/code-ml24](https://github.com/peizheg/code-ml24)

- Secured **first place** at **CodeML 2024** by developing a commodity demand prediction model for Canada and integrating Statistics Canada data using **Pandas**.
- Trained ML models using **TensorFlow** and **Scikit-Learn**, with the **Random Forest** model demonstrating superior performance, achieving a **93.48%** R<sup>2</sup> score and a **19.06%** SMAPE score