



INSTITUTE FOR  
CO-OPERATIVE EDUCATION

# Firas Al Haddad

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## SKILLS SUMMARY

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**Programming Languages** | Java • JavaScript • Python • C++ • SQL

**Frameworks & Libraries** | PySpark • Pandas • React • Node.js • Spring Boot • TensorFlow • Tailwind CSS

**Applications** | Visual Studio Code • Databricks • GitHub • Jira • Azure DevOps • SAP • Power BI

**Relevant courses** | Data structures and algorithms • Operating systems • System hardware • Databases

**Extracurricular activities** | Tutor (Tutorax) • Volleyball Tutor (Vanier college)

**Languages** | French • English

## EDUCATION

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### **Undergraduate Degree in Software Engineering Co-op**

Concordia University, GPA: 3.35

2023 - 2027

Montreal, QC

### **DEC in Pure and Applied Natural Sciences**

Vanier College

2020-2023

Montreal, QC

## WORK EXPERIENCE

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### **Data Analyst Intern**

Pratt & Whitney Canada

2025

Longueuil, QC

- Refactored legacy Databricks pipelines into a single modular PySpark codebase.
- Created reusable functions and added automated test cases, for cleaner workflow organization.
- Unified 20+ data sources into 2–3 clean, analytics-ready DataFrames for Power BI.
- Re-engineered Power BI dashboards to provide clear week-over-week performance insights.

### **Software Engineering Intern**

Fonex Data Systems

2025

Montreal, QC

- Developed a Python BLE backend using bleak, asyncio, to communicate with optical transceivers.
- Implemented a GATT communication layer to read and write SFP/QSFP EEPROM pages.
- Designed a connection manager that coordinates the BLE backed with a Tkinter GUI using threads.

## PROJECTS

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### **Peer Review Web Application**

Concordia, QC

- Built a full-stack web application using React, Java, and Spring Boot for student peer evaluation.
- Implemented user authentication and role-based access control for students and teachers.
- Designed a team management system where teachers can assign students to specific teams.
- RESTful APIs to handle data persistence, user management, and frontend & backend communication.

### **Mindfulness & Focus Tracker AI**

Concordia, QC

- Built a real-time attention detector using React & TensorFlow.js tracking gaze, blink, and head-pose.
- Implemented AI feedback cues (messages & soft audio) triggered by custom attention-drop thresholds.
- Developed a modular detection pipeline with adaptive calibration and adjustable sensitivity settings.
- Optimized performance using WebGL-accelerated models to reduce delay and ensure smooth tracking.