JAD DINA

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Proficient Skills

- **Python**
- **Java**
- **C/C++**
- **Excel**
- **HTML**
- **CSS**
- **JavaScript**
- **React.js**
- **Assembly**
- **MySQL**
- **ML/AI**
- **Data Preprocessing**
- **Data Analytics**
- **OOP Design**
- **Embedded Systems**
- **FreeRTOS**
- **Data Preprocessing**
- **Data Analytics**
- **Algorithms**
- **Git/Version Control**
- **R**
- **Unit Testing**
- **Communication**
- **Data Structures**

Education

Bachelor's of Applied Science, Software Engineering | Minor in Aerospace Engineering — *Graduation Summer 2028*
University of Calgary — *Calgary, Alberta*
GPA: 4.0

Machine Learning A-Z Certification in Python and R — *Udemy*

Engineering Experience

SOAR - *Avionics Software member* — Sept 2024 - Ongoing

Calgary, Alberta

- Enhanced **Rocket Ground Control** System **safety and security** by **90%** through implementing a **backend** program in **Python** that reads the content on a USB, which either allows or denies access based off the USB content.
- Wrote **Rocket logging system** and data pipeline in **C++**, leveraging **FreeRTOS Tasks** and **OOP** to create an abstracted module that logs to multiple backends, mostly flash.
- Wrote an abstracted driver in **C++** to extract sensor data from an **LSM6DSO IMU** using **SPI** protocol for communication with the sensors.
- Wrote **unit tests** for testing organization code, as well **debugged by logging** data over serial terminal using **UART** communication protocol.
- **Collaborated** with team members over **Github** on projects, participated in **code reviews** and **meetings,** and delivered working projects while adhering to tight launch **deadlines.**

Project Experience

Machine Learning/Data Analytics - Individual Study — May 2025 - Ongoing

Online

- Created a **Digit Recognizer Neural Network** in **Python**, by developing a **stochastic gradient descent** and **back-propagation** algorithm which optimized the neural network to a **95% accuracy** on the MNIST digit dataset.
- Wrote a **Random Forest Classification** algorithm in **Python** using multiple decision **trees** and **trained** it to predict cancerous cells to **94.3% accuracy** on a **cancer cell** dataset.
- Developed a **K-means clustering** algorithm in **Python** that utilizes the **Elbow method** to find the optimal clusters at **90% accuracy,** to analyze and classify customer groups for a business.
- Wrote **Python scripts** to read data from **excel** sheets, and then **preprocess** the data for **training and testing** machine learning models, and finally performing **data analysis** with **Matplotlib.**
- Wrote all algorithms utilizing **object-oriented design** which created models as objects, making it very simple to adjust variables which affect **model performence.**

Museum Application - School Project — Nov 2025 - Dec 2025

University of Calgary

- Designed a **database** for a museum by creating **entity relationship diagrams**, then representing it as a **database schema**, then finally creating the database using **MySQL.**
- Wrote **queries** in **MySQL** to perform **update** operations, **delete** operations, and **data retrieval** to manipulate or store data for business operations.
- Wrote a **Python** application to interface with the **database**, the **backend** was created for admin, employee, and client interaction, which was connected to the database for business logic.

Work Experience

Camp STEAM Canada - Camp Counsellor — June 2025 - August 2025

Port Coquitlam, BC

- **Taught** children from **ages 5 - 13** basic programming with **code blocks**, introduced the basics of **Python** and **programming with functions and libraries**, and as well **facilitated** 3D engineering design with **Tinker-cad.**

Shoppers Drugmart - Senior Merchandiser — July 2020 - August 2024

Coquitlam, BC

- Responsible for **customer service**, and distributing tasks from a position of **seniority,** as well managing **sales prices**, **back-stocking** merchandise, **operating cash till**, and putting out merchcandise.