

# Mohammed Al Ani

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## EDUCATION

### University of Waterloo

Expected 2029

*Bachelor of Applied Science in Mechatronics Engineering — GPA: 3.94/4*

## EXPERIENCE

### Big Tech

Feb. 2025 – Aug. 2025

#### Software Engineer

- Analyzed and cleaned large-scale industry datasets (200K+ rows) using **Python**, **Pandas**, and **NumPy** to uncover business insights
- Created interactive visualizations using **Matplotlib** and **Seaborn** to help clients understand operational trends and reduce inefficiencies
- Built automated data pipelines with **Python** that streamlined reporting workflows, saving clients 10+ hours per week
- Collaborated with product and sales teams to deliver data-backed insights that improved client retention by 15%

### Startup

Oct. 2024 – Present

#### Firmware Engineer

- Developed firmware in **Python** (pySerial) and **C++** for real-time energy monitoring and optimization
- Integrated data logging scripts using **Python**, **Pandas**, **Matplotlib** to analyze energy trends
- Automated testing & debugging scripts in **Python** to identify issues in the power system, reducing errors by 30%
- Used **Git** for version control, ensuring efficient collaboration and maintaining comprehensive documentation

## PROJECTS

### Full Stack NLP Chat Bot |

- Implemented **NLTK**-based natural language understanding (85% intent recognition accuracy) and integrated **spaCy**-based sentiment analysis (92% emotional tone accuracy). Developed with **Python**, **Flask**, **JavaScript**, and deployed a responsive web UI.

### CarPal – AI-Powered Car Image Analyzer |

- Built full-stack AI image analyzer with **React**, **Express.js**, **Tailwind**, and **Google Gemini API**. Extracted car metadata from images, featured image previews, JWT auth, and animated dashboard (50+ users).

### Expressjs.Yourself – Blog Platform |

- Lightweight **Express.js** blog system supporting 100+ posts. Used **JWT**, **bcrypt**, secure cookies, HTML sanitization, and dynamic post dashboard with **Tailwind CSS**.

### CurveFit Pro - Advanced Data Modeling |

- Developed **Streamlit**-based tool for regression (linear, exponential, polynomial). Used **SciPy** & **NumPy** to analyze 10K+ data points from uploaded CSVs and generate visualizations.

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, C++, Java, SQL, MATLAB, HTML/CSS

**Frameworks/Libraries:** React, NumPy, Flask, Django, Node.js, TensorFlow, Pandas, OpenCV, SciPy, Bootstrap

**Software & Tools:** Git, Docker, Jupyter, Streamlit, SPIKE Legacy, Figma, MS Azure, CLion, Spyder IDE, Anaconda

**Office Tools:** MS Office Suite, Google Workspace, Slack, MS Teams, Report Writing, Drafting, Excel Sheets, Power BI