SAMI NAJIM

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Professional Summary

Ambitious computer engineering student with strong foundation in **software engineering, machine learning, data engineering**, and **data science**. Passionate about leveraging cutting-edge technologies to solve complex problems at scale. Worked at and made significant impacts at global giants like **Emirates Airlines**, **Estarta**, and **Ecobee**, as well as joining the AI startup world as a **founding engineer** for **SkmAI** in Toronto, building impactful products serving thousands of users daily.

Education

University of Toronto   **Sep. 2022 – May 2026**
Bachelor of Applied Science and Engineering – **Computer Engineering (with PEY Co-op)**   *Toronto, Canada*

Experience

Ecobee   **May 2025 – Aug 2025**
Product Manager Intern   *Toronto, Canada*

- Led a project with the Data Science team to refine on-device smoke and CO alarm detection models, achieving an **F1 score of 93.27%**, **Precision of 96.17%**, and **Recall of 90.54%** on evaluation data.
- Evaluated and tested 3rd-party audio detection models (e.g., **glass break**) and contributed to model selection through precision-recall benchmarking.
- Annotated over **500+** video samples to validate **computer vision models** for **person, package, and vehicle** detection in Ecobee's upcoming outdoor camera.
- Constantly delivered data analysis reports and conducted competitive research on smart security features, directly influencing product and subscription strategy.

Estarta   **May 2024 – July 2024**
Data Science Intern   *Amman, Jordan*

- Engineered scalable **REST APIs** using **Flask** and **AWS**, reducing API response time by **25%** and significantly enhancing data accessibility across platforms.
- Optimized **SQL queries**, resulting in a **15%** reduction in query execution time and improved overall database performance.
- Developed a **machine learning model** using **PyTorch**, **NumPy**, and **scikit-learn** for contract generation and salary prediction, achieving **92%** accuracy and driving internal adoption at Estarta.
- Designed and implemented a **ReactJS** interface for the ML model, enabling the processing of **100+** contracts and salary predictions for **200+** candidates.
- Containerized applications with **Docker**, enhancing scalability and reducing deployment time.

The Emirates Group (Emirates Airline)   **May 2023 – July 2023**
Data Science and Data Engineer Intern   *Dubai, UAE*

- Architected and implemented data pipelines using **Azure Data Factory** and **Azure Databricks**, processing over **1TB** of daily flight and customer data.
- Assisted in the development and design of **PowerBI** dashboards for effective data visualization and business intelligence reporting.
- Implemented **machine learning models** using **scikit-learn** to predict flight delays, achieving **85%** accuracy.

Projects

GIS Mapper | *C++, GladeUI*   **April 2024**
∗ Collaborated in a team of 3 to create a mapping application with an interactive UI comparable to Google Maps.
∗ Used **C++** to implement **Dijkstra's** and **Greedy Heuristics** with **Glade UI**.

Diabetic Retinopathy Detection | *Python, PyTorch, ResNet-152, Google Colab*   **Sept 2024**
∗ Developed a **deep learning model** using **ResNet-152** to classify 5 stages of diabetic retinopathy from retinal images.
∗ Achieved **82.3% F1 score** with **98% accuracy** in detecting severe cases.
∗ Applied **data augmentation** to balance class distribution, improving model generalization.

Technical Skills

Tools & Languages: Python, C++, C, JavaScript, SQL, ReactJS, Flask, Django, Git, Docker, PyTorch, Numpy, Pandas, GPT, TensorFlow, scikit-learn, Matplotlib, PowerBI, Tableau, Node.js, FPGA, Verilog
Platforms: AWS, Azure, Dataiku, OpenAI, Cohere
Certifications: Microsoft Azure Fundamentals, Dataiku Core Designer, AI for Everyone (Coursera)