Arjan Waraich

647-473-1175 | waraicharjan97@gmail.com | https://www.linkedin.com/in/arjwaraich/ | https://github.com/RJN25

Education

University of Toronto Schools — Toronto, Canada
11th Grade Student — *Sept. 2024 – June 2026*

The Knowledge Society — Toronto, Canada
Alum — *Sept. 2023 – June 2024*

Experience

AI Consultation Project Intern — Mar. 2024 – Apr. 2024
Microsoft — TKS (The Knowledge Society) — *Remote*

- Collaborated with senior Microsoft engineers to increase efficiency within AI and energy costs optimization, specifically optimizing their datacentres
- Conducted research and formulated an extensive project regarding integration of underwater data centers and focused on the AI budget in an environmentally friendly manner
- Leveraged cooling properties, geothermic energy, energy reduction, and operating costs for proposed solution
- Crafted recommendation statistics, analytics, and compiled it all into a slide deck for Microsoft investors and engineers to consider
- Generated projected timeline and roadmapping of project integration to gauge consultation potential

Marketing Solutions Project Intern — Oct. 2023 – Dec. 2023
Google — TKS (The Knowledge Society) — *Remote*

- Worked alongside Google product managers to increase efficiency within the product management ecosystem
- Communicated with technical, marketing, and go-to-market (GTM) team members
- Created 3 primary recommendations to ensure communication between GTM teams and developers; genAI product updates, 3rd party service AdScraping, automated universal product update terminal connected to engineers' deployments

Projects

ProphetJet — Predictive Maintenance for NASA Turbofan Jet Engines RUL Metrics — March 2025

- Developed and feature-engineered a hybrid **LSTM-XGBoost-Random Forest** pipeline to forecast Remaining Useful Life **(RUL)** of turbofan engines using NASA's C-MAPSS dataset
- Integrated time-series deep learning with tree-based regression to model engine degradation, achieving **87.4%** RUL prediction accuracy (±2% std)
- Optimized feature selection via correlation matrix heatmaps and prioritized high-impact sensors to refine input vectors and boost model reliability
- Authored and presented a research paper on the model's development and results, successfully **accepted** into the 2025 **CUCAI** (Canadian Undergraduate Conference on AI) proceedings

ByteBite — ML-Based Triage Inventory Management System for Foodbanks — February 2025

- Built a machine learning **triage** model using Random Forest regression with Pandas and Scikit-learn to prioritize food distribution and reduce spoilage, trained on **real-world** food bank inventory data
- Designed a scoring system to rank food items by urgency and nutritional value, improving distribution efficiency for **AVENUE ROAD Foodbank Toronto** and others in the GTA
- Engineered backend data pipelines using Pandas and Scikit-learn for standardization across **9** nutritional and logistic features (e.g., expiry, quantity, weekly demand)
- Built a responsive, full-stack web interface with user authentication (MongoDB-JSON UX Architecture), dynamic inventory tracking, and Nutritionix API integration for real-time nutrient data

Technical Skills

Languages: Python, C++, HTML/CSS, JavaScript
Frameworks: Flask, CrewAI, Tkinter
Developer Tools: Google Colab, VS Code, Git, Figma, Linux, LaTeX
Libraries: pandas, Scikit-learn, NumPy, Matplotlib, Seaborn, Tensorflow, Pytorch