

# Tanay Jagadeesh

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## EDUCATION

### University of Waterloo

Bachelor of Applied Science in Management Engineering (Software & Industrial Systems)

Waterloo, ON

Sep 2025 – May 2030

## EXPERIENCE

### Founding Engineer – Hands AI

Full Stack & Data Pipelines

Toronto, ON

Sep 2025 – Dec 2025

- Designed and deployed production **TypeScript RESTful APIs** supporting recipe ingestion, intelligent search, and personalized recommendations for **200+ active users**
- Implemented **RAG pipeline** using **LangChain** and vector embeddings, improving suggestion accuracy by **35%** through semantic similarity matching
- Optimized backend routing, **PostgreSQL queries**, and **Redis caching**, reducing API latency by **30%** and increasing throughput by **25%**

### Software Developer – UW Orbital

Ground Station Systems

Waterloo, ON

Sep 2025 – Present

- Built **telemetry logging middleware** and **real-time monitoring pipelines** tracking packet flow, system health, and fault events
- Collaborated with satellite teams to integrate ground-station software, improving command execution and packet reception rates by **40%**
- Developed **FastAPI** telemetry ingestion and command-and-control endpoints, reducing average latency by **30%**

### Software Engineer – Jags Consulting Group

Full Stack

Toronto, ON

Jan 2024 – Apr 2024

- Designed and delivered scalable **full-stack web applications** for enterprise clients
- Implemented **CI/CD pipelines**, logging systems, and validation checks, reducing post-deployment incidents by **35%**

## PROJECTS

### Job Market Analytics Pipeline | *Python, PostgreSQL, Streamlit, JSearch API*

Jan 2026

- Engineered automated **ETL pipeline** collecting **1,500+** job postings via API, designing **PostgreSQL star schema** with fact and dimension tables to eliminate data redundancy and enable efficient analytical queries
- Wrote **5 complex SQL queries** using **multi-table JOINs, window functions, self-joins**, and **GROUP BY aggregations** to analyze skill demand patterns, salary trends, and top hiring companies across Canadian tech market
- Revealed **SQL appears in 84%** of data engineering roles vs ML in **30%** through skill co-occurrence analysis and built **interactive Streamlit dashboard** with **Plotly visualizations**

### Financial News Sentiment Stock Analyzer | *Python, scikit-learn, VADER, SQLite*

Dec 2025

- Built end-to-end **ML regression pipeline** analyzing **3,000+** financial articles using **VADER sentiment analysis**, achieving **1.44% MAE** with **Random Forest** across **5 stocks**
- Engineered **20+ time-series features** including **7-day sentiment momentum**, article volume trends, and source diversity metrics, with **feature importance analysis** identifying sentiment momentum as strongest predictor

### LockIn AI – Distraction Detection App | *Python, YOLO, OpenCV, Flask, Electron*

Nov 2025

- Built desktop productivity tool in **36-hour hackathon** using **YOLO + OpenCV** for **real-time webcam inference** detecting phone usage and face orientation
- Implemented **Python backend** with **Flask + SocketIO** and created **Electron shell** with **Next.js UI** for habit toggles, site blocking, and live monitoring

## TECHNICAL SKILLS

**Languages:** Python, SQL, JavaScript, TypeScript, HTML/CSS

**Data & Databases:** PostgreSQL, SQLite, pandas, NumPy, scikit-learn, Matplotlib, XGBoost, Streamlit, PyTorch

**Tools & Frameworks:** Git, Flask, FastAPI, Electron, YOLO, OpenCV, Redis, Azure, Databricks