

Tanay Jagadeesh

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Technical Skills

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

Frameworks & Libraries: FastAPI, pandas, NumPy, scikit-learn, Matplotlib, XGBoost, Streamlit, PyTorch

Developer Tools: PostgreSQL, AZ-900 (Azure Fundamentals), Databricks, YOLO, OpenCV, Supabase, WebSockets

Experience

Founding Engineer, Hands AI | *TypeScript, PostgreSQL, Python, Supabase, LLM*
Backend, Data and ML Infrastructure

Toronto, ON
Sep 2025 – Dec 2025

- Built production RAG pipelines using Ollama embeddings and vector search to deliver personalized recommendations to **250+ signup users** across **500+ recipes**
- Engineered Supabase/PostgreSQL systems across **4 domains** with row-level security, executing **3,000+ transactional writes** with zero data loss
- Shipped TypeScript services handling **1,500+ authenticated sessions** with concurrency-safe inserts across **5 normalized tables**

Software Developer, UW Orbital | *Python, FastAPI, Git*
Ground Station Systems

Waterloo, ON
Sep 2025 – Present

- Built FastAPI logging pipelines instrumenting **10+ services** and capturing **1,500+ error events** for fault diagnosis
- Implemented validation layers processing **1,000+ telemetry packets/day**, blocking malformed payloads
- Developed tooling surfacing **25+ failure modes** to speed incident triage and improve operational reliability

Projects

Canadian Tech Job Market Analytics Platform | *Python, PostgreSQL, Streamlit, pandas, Plotly*

Jan 2026

- Engineered automated ETL pipelines ingesting **1500+ job postings** into PostgreSQL star-schema warehouses and running **6 analytical SQL models** (CTEs, window functions, percentiles) to compute real-time skill demand and salary benchmarks across **17 companies**
- Built a **4-page interactive Streamlit BI dashboard** with Plotly visualizations, dynamic filtering, and co-occurrence heatmaps analyzing **10+ job titles** and **8 core skills**
- Implemented scheduled refresh and analytics workflows generating **daily market trend updates**, salary estimates for **10+ roles**, and **19 unique skill-pair insights**, revealing SQL in **84%** of data engineering roles

Code Clash, Real-Time Competitive Coding Platform | *Next.js, Supabase, WebSockets*

Jan 2026

- Built a real-time 1v1 competitive coding platform with WebSocket matchmaking, opponent tracking, and synchronized match state serving **500+ registered users**
- Designed concurrency-safe PostgreSQL schemas with triggers, functions, and RLS policies to persist **4,000+ match sessions** across normalized tables
- Designed and implemented real-time ranking and matchmaking pipelines computing win rates, Elo-style ratings, streaks, and percentiles across **1,200+ competitive problem attempts**

LockIn AI, Discord Distraction Detection Bot | *Python, YOLOv8, OpenCV, Discord API*

Nov 2025

- Built a computer-vision Discord bot analyzing live webcam streams at **18 FPS** using YOLOv8/OpenCV to detect off-task behavior in real time
- Engineered asynchronous event pipelines streaming **300+ distraction alerts** into Discord channels across **10+ monitored sessions**
- Implemented backend orchestration with Flask SocketIO handling **1,000+ bot commands**, optimizing model batching to reduce inference latency by **28%** and CPU usage by **22%**

Education

University of Waterloo

Bachelor of Applied Science in Management Engineering (Software/Industrial Equivalent)

Waterloo, ON
Sep 2025 – May 2030