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Oltan Sevinc

Profile

Solo founder of Hango (live on iOS & Android) and PhD candidate in neuromorphic ML. Designed and shipped its full production stack as the sole engineer — a personalized recommender over `pgvector`, an LLM-powered ingestion pipeline that processes 80,000+ events, a serverless API, and a cross-platform app. Backend foundation in modern C++ at Honeywell and distributed PyTorch (DDP) training, plus a mechatronics background in sensor fusion and state estimation. Targeting ML engineering and applied-science roles that combine research depth with hands-on system ownership.

Education

Feb 2024 – Present **PhD, Computer Science**, *University of New South Wales*, Sydney
Thesis: Applications of Spiking Neural Networks in Robotics.
Australian Government Research Training Program (RTP) Scholarship.

Jul 2018 – Aug 2023 **B.E. Mechatronic Engineering (Honours) & Computer Science (AI)**, *University of New South Wales*, Sydney
Thesis: Robotic Teleoperation with Haptic Feedback for Remote Ultrasounds.

Industry & Startup Experience

Jul 2025 – Present **Founder & ML Engineer**, *Hango (hango.au)*, Sydney

- Built and shipped the full production stack as the sole engineer — geospatial recommender, LLM ingestion pipeline, serverless API, and cross-platform mobile app — live on the iOS App Store and Google Play.
- **Recommender:** engineered a personalized feed recommender in PL/pgSQL over `pgvector` semantic embeddings, combining interaction-weighted interest clustering, a Bayesian-shrunk trending signal, and explore/exploit balancing; serves materialized candidate feeds with server-side impression tracking, per-cycle deduplication, and archetype-based cold-start for new users.
- **Group scoring:** designed a group recommendation layer that aggregates members' affinities with a max-plus rule — so one strongly-matched member can carry the recommendation — alongside a shared-interest breadth factor that rewards broadly shared appeal.
- **Data pipeline:** built an automated, LLM-powered ETL pipeline that scrapes, normalizes, enriches, and semantically deduplicates unstructured event data — ingesting 80,000+ raw events into ∼8,000 clean templates across 1,600+ venues at an under-1% human-review rate via a custom verification dashboard.
- **Serving & infra:** implemented the API layer as Deno/TypeScript Supabase Edge Functions (search, LLM group-itinerary builder, push notifications, Google Places resolution); enforced row-level security across all tables and instrumented the product with PostHog analytics dashboards and Sentry error monitoring.
- **Frontend:** designed and deployed the cross-platform app (iOS, Android, shareable webview) in React Native / Expo using LLM-assisted workflows. *[add real engagement metrics post-launch, e.g. MAU / retention]*

Dec 2021 – Sep 2022 **Software Engineer (Intern, retained part-time)**, *Honeywell*, Sydney

- Joined as a summer intern and retained part-time through the academic year on the backend of Experion, Honeywell's flagship process-control platform.
- Developed backend features in modern C++ with Boost; automated the nightly build-archiving process in Python; worked in an Agile team (JIRA, Confluence, Git).

Publications

Under review **M. O. Sevinc**, L. Wu, F. Cruz. "From Micro-Failures to Macro-Stability: Resolving the Explainability Paradox in Spiking Neural Networks." *(first author)*

ACRA "Towards Closing the Domain Gap with Event Cameras." Australasian Conference on Robotics and Automation. *(first author, 2025)*

Research & Teaching Experience

Sep 2022 – Aug 2023 **Honours Thesis Student**, *University of New South Wales*, Sydney

- Built a real-time haptic teleoperation interface between a Universal Robots UR5e arm and a 3D Systems Touch haptic device (ROS, MoveIt, Python) for remote ultrasound.

Feb 2022 – Present **Teaching Assistant**, *University of New South Wales*, Sydney

- Teach Postgraduate AI (COMP9414), robotics, autonomous systems, and computer networks; lead tutorials on Extended Kalman Filtering, sensor fusion, computer vision, and kinematics.

Research Focus

- Spiking & Neuromorphic Networks
- Event-Based Vision
- Sensor Fusion & State Estimation
- Interpretability / XAI

Technical Skills

Languages: Python, C++, SQL (PL/pgSQL), TypeScript/JavaScript, MATLAB

ML & Data: PyTorch (DDP), recommender systems (vector search / `pgvector`), LLMs & LLM-powered ETL, computer vision (OpenCV), SNNs (SpikingJelly), scikit-learn

Systems & Infra: PostgreSQL / pgvector, Supabase, Deno edge functions, ETL pipelines, GCP, Docker, Git, Linux, PostHog, Sentry

Robotics & Estimation: ROS/ROS2, MoveIt, Gazebo, Extended Kalman Filters, sensor fusion, LIDAR processing, kinematics