

Ju Lin

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Education

Imperial College London

London, UK

Master of Science in Applied Computational Science and Engineering

Sep 2025 – Sep 2026

Selected modules: Modern Programming Methods; Computational Mathematics; Data Science and Machine Learning; Deep Learning; Modelling and Numerical Methods; Advanced Programming; Inversion and Optimisation; Parallel Programming.

The Hong Kong Polytechnic University

Hong Kong

Bachelor of Engineering with Honours in Aviation Engineering (Ranked Top 15%)

Aug 2021 – May 2025

Minor in Electronics & Information Engineering

Selected modules: Computer Programming; Electrical and Electronic Engineering; Mobile System and Application Development.

Technical Skills

Programming: Python, TypeScript, JavaScript, SQL, HTML/CSS, Swift

Web & Data: React, Next.js, Node.js, PostgreSQL, Firebase, Supabase, Neon

DevOps/Cloud/ML: Git, Docker, GDB, CI/CD, AWS, Azure, GCP, Vercel, Cloudflare, LLM fine-tuning, RAG

Highlighted Experience

Clusy Inc. (Backed by Founders, Inc.)

San Francisco, CA

Co-Founder & CEO

Jan 2026 – Present

- Built **Clusy**, an **AI-native data-science notebook platform** with an autonomous coding agent that reads, writes, and executes notebook cells via tool-calling, with multi-agent orchestration, branched experiment sweeps, and tiered, subscription-gated model access.
- Architected a **React 18 + TypeScript** SPA with a virtualized Cursor-style three-column IDE (**CodeMirror 6**, TanStack Virtual/Table, Zustand, TanStack Query) and **git-style branching notebooks** with live branch-diffing and a React Flow DAG minimap, holding only ~15 cells in the DOM and initial JS under **200KB gzipped**; streamed real-time execution over a custom **WebSocket** protocol with rAF-buffered 60fps output rendering.
- Engineered a **Python/FastAPI** backend on **AWS** (GitHub Actions → ECR → EC2 via SSM, Amplify), with **Supabase** (Postgres/Auth/Realtime), **Stripe** subscription billing, Resend transactional email, **Databricks/Snowflake** warehouse integrations, and a **Modal**-based detached training-job execution backend.

Queen's Lane Consultant

London, UK

Software Engineer, Full Stack

Mar 2026 – Jun 2026

- Built **Narrative Agent**, a fully custom **autonomous AI agent** on AWS Bedrock that drafts HMRC R&D Technical Reports from call transcripts, evidence, and DSIT guidance, replacing a multi-day manual process with a self-looping agent featuring streaming parallel tool dispatch, multi-agent orchestration (20 sub-agents), and 3-tier context compression.
- Engineered a 28-tool framework with **4-tier cross-session memory** (pgvector hybrid search, episodic archival, procedural skills), self-correcting draft-proof loops, paragraph-level provenance, prompt caching (~90% token saving), and a real-time **WebSocket event-sourcing** frontend with rich-text editing and branded .docx/.pdf export.
- Architected on **AWS** (CDK, Bedrock, Lambda, RDS PostgreSQL + pgvector, S3, Amplify); integrated Aircall, Teams, and Graph API email pipelines with session-cookie bridging to the Node.js portal across **2,300+ clients**.

Energy Futures Lab, Imperial College London

London, UK

Graduate Research Assistant

Nov 2025 – Present

- Supervised by Professor Anna Korre. Decomposed a monolithic calculator into **modular services** with feature flags, enabling graceful degradation and independent scaling of LLM, routing, and database layers.
- Integrated **real-time routing APIs** (TfL, OSRM) with a 5-layer NLP parsing pipeline to automate carbon-emission estimation across three travel categories.
- Built an **educator-facing analytics dashboard** actively used by college sustainability officers for policymaking.

EmoBay Limited (Backed by PolyVentures)

Hong Kong

CTO & Co-Founder

Jan 2025 – Present

- Shipped full-stack products in React/Next.js webapps, native iOS, relational databases, and multi-cloud infra.
- Integrated **fine-tuning**, guardrails and RAG into production; grew the platform to **1K+ users** and **19K+ messages**.
- Designed backend data pipelines and CI/CD workflows ensuring reliable feature delivery; work featured by **Forbes**.

Intelligent Positioning and Navigation Laboratory, HKPolyU

Hong Kong

Research Intern

Dec 2024 – Jan 2025

- Collected and pre-processed **multi-sensor and drone datasets** for positioning experiments.
- Supported EKF/LGO model development and error analysis to benchmark positioning performance across test scenarios.

Sustainable Thermo-Fluid Energy Systems Lab, Ghent University

Ghent, Belgium

Research & Development Intern

Jul 2024 – Aug 2024

- Executed experiments on two-phase injection compressor performance across intake and injection operating conditions.
- Analyzed measurement trends and documented findings for **research reporting** with the thermo-fluid systems team.

LifeSparrow Solutions Limited

Hong Kong

- Contributed to **AI workflows** for drone imagery and a data-streaming feature enabling encrypted, real-time video transmission and detection at long distances.
- Built **UI/UX components** for web tools supporting drone datasets and internal analysis pipelines.

Highlighted Projects

FusionFly (github.com/ada-jl4025/FusionFly)

Sep 2024 – May 2025

- Built an open-source framework for AI-powered positioning data standardization at PolyU IPN Lab.
- Published a paper with **4 citations**.