David Lu

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Languages: Python, TypeScript, JavaScript, Go, SQL, Bash
Full Stack: Next.js, Node.js, Express, FastAPI, Django, PostgreSQL, MongoDB, REST APIs, Vitest, Playwright
Infra & Cloud: Docker, GCP (Cloud Run, BigQuery), AWS (EC2, Lambda, S3, SQS, Bedrock), Redis, GitHub Actions, Linux

Education

University of Waterloo **Expected Apr 2028**
BASc in Management Engineering (3.8/4.0 GPA), Option in Computing Waterloo, *ON*
Awards: Ted Rogers Future Leaders Scholarship (**$27K**), Rotary Foundation Award, UW President's Scholarship

Work Experience

8090 Solutions Inc **Sep 2026 - Dec 2026**
Member of Technical Staff Redwood City, CA

- Built catalog management and opportunity tracking flows for PackPilot, an AI quoting tool used by sales reps at a multi-billion-dollar public medtech company, helping cut quote turnaround from 2 weeks to half a day (**>95%**) on a multi-million-dollar contract
- Improved PackPilot's AI matching of competitor surgical pack photos to the client's catalog, and built its evaluation system (**10,000**+ labelled datapoints), driving a 24% gain in matching accuracy
- Drove **3 client integrations** (Salesforce, Microsoft ADLS, a 3rd-party supplier API): owned cross-team communication and scoping across **5 teams**, and built data pipelines that keep catalog, pricing and CRM data validated and consistent
- Built a personal agentic delivery harness on Claude Code + MCP connecting Granola, Google Calendar, Jira, GitHub Actions and internal skills, tests and knowledge base, taking work from meeting notes to tested, reviewed PRs and cutting my average ticket resolution time by 23%

Cognichip AI **Jan 2026 - Aug 2026**
Software Engineer Intern Redwood City, CA

- Built **Plan Mode** end-to-end, an agentic feature in an **AI IDE** for **chip design** (backed by **Intel**'s CEO): interviewed chip designers, wrote the **RFC** and aligned design and tech leads, and shipped **backend** + **frontend** across multiple repos
- Architected the migration from a monolithic subgraph to independent, routable **LangGraph** graphs with standardized handoff protocols for shared state; built the multi-graph system on **AWS** (**SQS**, **RabbitMQ**), enabling mode switching
- Shipped improvements across a **~500k LOC** multi-repo codebase (**Go**, **Python**, **Docker**, **Bash)**: migrated to a new API services repo, added **Grafana/Prometheus** observability, improved secrets management and setup scripts

Loblaw Digital (link) **May 2025 - Aug 2025**
Software Engineer Intern Toronto, ON

- Architected scalable **Airflow DAGs** (**Python**, **GCP**) with multi-stage LLM inference to predict ingredient composition for **150,000**+ products, **4x**'ing data coverage to support vendor-negotiation analysis
- Reduced hallucinations and parse failures in production LLM outputs by adding **RAG** with **BigQuery** grounding and strict JSON schemas, enabling reliable integration with downstream automated systems

Loblaw Companies Limited **Sep 2024 - Dec 2024**
Software Engineer Intern Toronto, ON

- Built **data pipelines** for a pilot AI scheduling initiative (**Python**, **Vertex AI**, **GCP**), lifting extraction accuracy by 15%, and automated a manual Excel reporting workflow, saving 100+ hours monthly

Leadership & Community

UW Blueprint (link, repo) **Dec 2025 - Aug 2026**
Technical Project Lead Waterloo, *ON*

- Led **8** developers building a full-stack Driver and Route Management system for Food4Kids Waterloo Region, supporting meal deliveries for **1,400+** children across **129** schools; kickstarted expansion to **6** additional chapters
- Architected the multi-tenant deployment stack (**Dockerized** backend on **GCP** Cloud Run, **Firebase** Hosting/Auth, **Neon** Postgres) and authored the runbook that makes new-chapter setup repeatable