# Luxin Zhang

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## Professional Summary

Software and AI engineer owning system design and delivery for large-scale file-management systems at Fortinet. Builds AI applications end to end, including autonomous agents and memory-enabled workflows; author of two accepted AI workshop papers, completed 20 academic peer reviews, and winner of 7 AI hackathons.

## Work Experience

**Fortinet** **Apr. 2025 – Present**
*Software Developer II* *Sunnyvale, CA*

- Owned **system design and delivery** of core FortiDrive file-lifecycle engines using **Python, Django REST APIs, Elasticsearch**, and **AWS with Docker/Kubernetes**, supporting policy enforcement and data integrity.
- Implemented backend **legal-hold and retention policies** to preserve records and enforce file-lifecycle compliance.
- Delivered audit logging and tagging, enabling file-lifecycle traceability and searchable organization of managed files.
- Built a **Claude Code review agent** with structured memory and RICE-based code evaluation, persisting architecture context across sessions to support regression detection and consistent code changes.

**Computer Packages Inc.** **Mar. 2024 – Apr. 2025**
*Software Engineer* *Rockville, MD*

- Partnered directly with enterprise customers to scope requirements, debug issues, and deliver solutions using C#/.NET, SQL Server, and REST APIs, translating client needs into production workflows and integrations.
- Implemented **Okta SSO and role-based access control**, enabling authenticated sign-in and permission-based access for enterprise clients.

**Vivo Communication Technology Co. Ltd.** **Mar. 2022 – Jul. 2022**
*Software Engineer – Computer Vision & Camera Algorithm* *Shenzhen, China*

- Improved image-sharpness accuracy **from 63% to 82%** with OpenCV, YOLOv5, HED, and facial landmarks; built a Flask scoring platform that saved 2 engineering hours per week.

**TikTok** **May 2021 – Jul. 2021**
*Data Platform Analyst* *Beijing, China*

- Optimized a MySQL data pipeline, reducing CQC analysis turnaround **from one day to one minute**.
- Analyzed 30K records with Tableau and R, contributing to a 17% improvement in platform performance.

## Selected AI Projects

**Hypothesis Atlas | Open-Source AI Research Platform** **Jan. 2026 – Present**

- Built and open-sourced a **36K-line AI research platform** using TypeScript, Next.js, PostgreSQL, and Redis, generating cited evidence maps, knowledge trees, and paper plans from OpenAlex, PubMed, and GEO; implemented **claim verification** with NLI and LLM judges, persistent research graphs, and multi-agent peer review.
- **Fine-tuned Qwen2.5-0.5B with LoRA and PyTorch** on 1,259 expert-annotated SciFact claim–abstract pairs, improving biomedical claim-verification **macro-F1 from 0.37 to 0.61** and **contradicted recall from 4% to 62%**, while maintaining approximately 7% false-support through validation-tuned thresholds. *3rd Place, Disrupt Bio Hackathon.*

**MedBrain | Clinical-Operations RAG Application**

- Built a **Python/FastAPI clinical RAG pipeline** with PDF/HTML ingestion, OpenAI embeddings, PostgreSQL/pgvector retrieval over 22 public-health documents, citation-grounded SSE responses with abstention, and an 18-question evaluation harness measuring hit rate, MRR, and LLM-as-judge quality.

## Selected Publications

- **What Makes a Virtual ISA Agent-Programmable?**
  *VISA 2026 Workshop @ MICRO 2026* | DOI: 10.5281/zenodo.24062377
- **From Episodes to Procedures: Scope-Aware Memory Promotion for Lifelong Enterprise Agents**
  *AIAS 2026 Workshop on Lifelong Agents* | DOI: 10.5281/zenodo.24063133

## Technical Skills

**Languages:** Python, TypeScript, JavaScript, C#, SQL, C++, Java
**Backend / Frontend:** Django, FastAPI, .NET, Node.js, React
**AI:** OpenAI / Anthropic APIs, Claude Code, LangChain, LangGraph, MCP, RAG, pgvector
**Infrastructure / Data:** AWS, Docker, Kubernetes, Elasticsearch, PostgreSQL, SQL Server, CI/CD

## Education

**Duke University** **Aug. 2021 – Dec. 2023**
*Master in Electrical and Computer Engineering* *Durham, NC*
Honors: Chancellor Scholarship (sole recipient, 2021); 50% Merit-based Scholarship

**Stony Brook University** **Aug. 2018 – Jul. 2021**
*B.S. in Applied Mathematics and Statistics* *Stony Brook, NY*
Honors: Magna Cum Laude; Dean's List; GPA: 3.84