

# Edison Xu

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**Objective:** Seeking Software Development Engineer or AI/ML Engineer position as a new graduate/entry level

## EDUCATION

**Georgia Institute of Technology**

**Aug 2022 - Dec 2024**

*Master of Science in Computational Science & Engineering*

**University of California - Santa Barbara**

**Oct 2019 - Mar 2021**

*Bachelor of Art, Applied economics*

## EXPERIENCE

**Highmark Inc.**

**May 2024 - Present**

Software Engineer (Generative AI team)

Pittsburgh, PA

- Architected an autonomous AI deep research agent that decomposes queries for parallel search and synthesizes multi-source data, using a **Critic model** in a self-correction loop to ensure factually accurate and coherent reports.
- Engineered an enterprise knowledge workspace with Vertex AI Search and **Chain-of-RAG**, using layout-aware chunking and indexing to retrieve and rerank evidence, producing accurate, source-grounded answers from private files.
- Developed an internal **multi-modal** chatbot using Vertex AI (Gemini API) that processes text, PDF, image, and voice inputs via **TypeScript/React** frontend and **FastAPI** backend, enhancing employee efficiency for routine tasks.
- Built a **Retrieval-Augmented Generation (RAG)** system using Flask, integrating embedding models and Gemini LLM to answer employee queries on internal policies, summarize documents with sources, and cut search time 70%.
- Deployed GitOps **CI/CD** pipelines with Cloud Run and **Kubernetes**, optimizing deployment workflows for efficiency.

**ChineseInvestors.com Inc.**

**Sep 2022 – Nov 2022**

Data Analyst

San Gabriel, CA

- Developed a market cycle prediction model using multiple machine learning algorithms to analyze price strength, trend direction, and momentum indicators, increasing investment strategy performance and decision-making accuracy.
- Optimized a **PySpark** and Azure Databricks data pipeline by implementing data partitioning and caching, reducing query execution time and streamlining processing for over 1 million stock records.

## PROJECTS

**FigBrain: Figma Multi-Agent Plugin**

**Apr 2025 – May 2025**

- Built a Figma AI agent at the Microsoft AI Hackathon, enabling natural-language prompts to generate and populate FigJam components via the **Model Context Protocol (MCP)** and automated Figma API/plugin flows.
- Designed a supervisor **multi-agent** system using **LangGraph**, where a master orchestrator routed tasks to planner, executor, and verifier agents with **Chain-of-Thought** prompts and **ReAct** loops, validated at ~85% first-try accuracy.
- Cut API costs ~28% and lowered latency through **long/short-term memory** mechanism, plan/result caching, and dynamic model switching between lightweight and advanced LLMs.

**Golang-based High-Efficiency Search Engine**

**Aug 2023 - Dec 2023**

- Developed a **Go**-based search engine with text and vector search capabilities, using **gRPC** for microservices architecture
- Implemented a distributed web crawler with **Kafka** cluster integration for efficient data collection and processing
- Enhanced search relevance using **TF-IDF** and **BM25** ranking algorithms, with Trie trees for optimized query suggestions

**CloudBin: Cloud-Base Distributed File Storage System**

**Jan 2023 - Mar 2023**

- Designed a storage system using **Spring Boot**, Vue3 and AWS S3, featuring chunk-based file uploads for reliability
- Leveraged **Redis** with a Bloom Filter to prevent cache penetration, boosting cache hit rate and reducing database load
- Integrated **ElasticSearch** for efficient fuzzy file name searches, reducing search time and improving accuracy

## SKILLS

**Language**

Java, Python, Go, JavaScript, Typescript, C, HTML, CSS, R, SQL

**Frameworks**

React.js, Vue.js, Spring Boot, Django, Flask, Node.js, Express.js, Selenium

**Database/Big Data**

MySQL, PostgreSQL, MongoDB, Redis, PySpark, DynamoDB, Firebase

**Developer Tools**

Docker, Kubernetes, Jira, Git, AWS, GCP, Postman, Nginx, Linux