Shuolin (Leo) Yin

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EDUCATION

University of Toronto   Toronto, ON
Bachelor of Applied Science and Engineering in Computer Engineering + PEY Co-op   *Sep 2023 – Apr 2027*
- Recipient of Faculty Of Applied Science And Engineering Admission Scholarship
- Recipient of Edward S. Rogers Sr. Admission Scholarship

WORK EXPERIENCE

The Institute of Automation, Chinese Academy of Sciences (CASIA)   Beijing, China
Research Assistant under Prof. Yang Yang, Prof. Jinlin Wu and Sr. PD Zhen Chen   *Feb 2024 - Sep 2024*
- Streamlined research on **Medical multimodal large language models (MLLMs)** through systematic literature review and novel experimental design, developing methodology for **MICCAI 2025 submission**
- Engineered an **end-to-end data pipeline** for medical imaging benchmark creation using **Python**, incorporating automated quality checks and custom annotation tools, resulting in **75%** reduction in processing time and **40%** improvement in annotation accuracy
- Developed a **Multimodal evaluation framework** using **PyTorch**, benchmarking **SOTA MLLMs** in **clinical medicine** with metrics for **accuracy**, **robustness**, and **cross-modal consistency**.
- Spearheaded **weekly technical discussions** and authored comprehensive **research documentation**, facilitating knowledge transfer across interdisciplinary teams of **medical experts** and **ML researchers**

VolunTrack Org.   Toronto, ON
President/Founder   *Jun 2022 - Sep 2024*
- Founded and scaled a **Non-Profit Organization** through a structured **Four-tier management system**, growing the company to **50+ members** and establishing partnerships with **100+ global non-profits**.
- Architected an **AI-powered volunteer matching system** using **TensorFlow** and **scikit-learn**, achieving **85% matching accuracy** and reducing manual matching time by **70%**.
- Developed a **full-stack volunteer platform** with **React Native** and **React.js**, integrating **MLOps practices** and **automated model retraining pipelines**, serving **1000+ monthly active users**.
- Implemented **real-time analytics** using **Firebase**, **Cloud Firestore**, and **TensorFlow.js**, deploying **ML models** for volunteer engagement prediction and churn analysis across **100+ organizations**.
- Established **AI innovation program**, leading to **30+** successful ML projects and **10+** conference speaking engagement.

PROJECT EXPERIENCE

ReassurED - Medical AI-Powered Emergency Care Navigator   Montreal, QC
Project Lead   *Sep 2024*
- Led development of an **AI-driven medical triage system** through a **24-hour** hackathon, integrating **clinical guidelines** and **real-time hospital data** via **React Native** and **Firestore**.
- Implemented an **intelligent triage algorithm** using **Few-Shot Learning** through **medical examples** and **COT reasoning prompts** with **Deepseek-v3**, achieving **90%** alignment with standard **Emergency Severity Index (ESI)** guidelines.
- Built secure backend with **Firestore** and **FastAPI**, implementing **structured medical data processing with SNOMED-CT integration** and web scraped **hospital Data integration** for real-time wait times.
- Developed a **hospital recommendation system** combining **LLM-based assessment** with **weighted algorithm**, factoring in **emergency wait times**, **facility specializations**, and **distance metrics** to reduce patient decision time by **70%**.

YiXing - AI-Driven Personalized Travel Planner   Toronto, ON
AI Engineering Lead / Co-Founder   *Jun 2023 - May 2024*
- Architected and deployed a **production-grade** LLM system with **Fine-Tuned GPT-Based Models**, training on **1,000+** curated travel itineraries to achieve **85% user satisfaction rate** based on post-trip feedback.
- Engineered a **RAG pipeline** processing **5000+** travel documents using **LangChain**, **Pinecone vector DB**, and **custom chunking strategies**, improving travel suggestion accuracy by **35%** and reducing waiting time by **90%**
- Developed **serverless APIs** using **AWS Lambda** to handle **LLM integration**, **user data management**, and **travel preference processing** for the React Native frontend.
- Led a team of **six**, implementing **A/B testing** and **performance monitoring** to continuously improve fine-tuned model.

IEEE UofT   Toronto, ON
Web Team Associate   *Jun 2024 - Present*
- Developed and maintained **full-stack web applications** with a **React.js frontend** and **Django backend**, enhancing IEEE UofT's main website and event platforms with a **responsive, user-friendly design**.
- Improved performance by **optimizing APIs and caching**, reducing load times and enhancing **user experience**.
- Collaborated within an **Agile team** to build and deploy new features and ensure a **seamless experience**.

SKILLS

Programming Languages: **Python**, JavaScript, **C/C++**, C#, HTML, Swift, **MATLAB**
Frameworks & Libraries: **TensorFlow**, **LangChain, OpenCV, YOLO, PyTorch**, React, Node.js, Django
Cloud & DevOps: **Amazon Web Service**, **Google Cloud Platform**, Firebase, Git, CI/CD
Development Tools: **Vertex AI**, Github, Xcode, Unity, Fusion 360, Blender, AutoCAD