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
- Implemented and evaluated **SOTA MLLM architectures** using **PyTorch**, focusing on cross-modal attention mechanisms and medical knowledge integration for enhanced diagnosis reliability
- 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 and developed a **full-stack volunteer management platform** using **React Native** and **React.js** for web/mobile applications via **CI/CD pipeline**, achieving **1000+ monthly active users**.
- Designed a **scalable database architecture** using **Firebase Realtime Database** and **Cloud Firestore**, integrating with **GCP services** for efficient data management across **100+ organization profiles**.
- Establish **tech mentorship program**, resulting **30+** successful project and **10+** conference speaking engagement.

PROJECT EXPERIENCE

ReassurED - AI-Powered Emergency Care Guidance/Navigator   Montreal, QC
Project Lead   *Sep 2024*
- Led a team through a **24-hour** hackathon, developed a cross-platform emergency healthcare app using **React Native (Expo)** and integrated real-time hospital data via **Firestore**.
- Implemented **dynamic triage** and hospital **recommendations system** using **Few-shot Learning** with **Deepseek-v3** and **custom weighting algorithm**.
- Built scalable backend with **FastAPI** for real-time hospital info, leveraging web scraping and auto data updates.
- Enhanced user experience with location-based hospital maps using **react-native-maps** and **expo-location**.

YiXing - AI-Driven Personalized Travel Planner   Toronto, ON
Project Lead / Co-Founder   *Jun 2023 - May 2024*
- Led an **agile development team** of six in building an AI-powered travel planning platform, integrating **Fine-tuned LLMs** with **React Native** to generate personalized itineraries.
- Designed and implemented a **Retrieval-Augmented Generation (RAG)** system using **LangChain** and **vector databases**, optimizing travel recommendations based on historical user data.
- Built a **scalable backend architecture** with **AWS Lambda** and **Node.js**, employing **RESTful APIs** and **microservices** for high-efficiency data processing.

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: **LangChain, OpenCV, YOLO, PyTorch**, **TensorFlow**, 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