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   *Feb 2024 - Sep 2024*
- Streamlined research on **medical multimodal large language models (MMLLMs)** 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 MMLM 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 team 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, achieving **1000+ monthly active users**.
- Secured a partnership with **Google Cloud Platform**, receiving **cloud credits** and **technical training opportunities** for **20+ development team members**.
- Implemented a **CI/CD pipeline** with **Agile methodology**, leading to the successful deployment of **15+ major features**, **4 major revisions**, and reducing deployment time by **70%**.
- Designed a **scalable database architecture** using **Firebase Realtime Database** and **Cloud Firestore**, integrating with **GCP services** for efficient data management across **100+ organization profiles**.
- Established **tech mentorship program**, connecting students with real-world projects, resulting in **30+ successful project** completions and **10+ conference speaking engagements**.

PROJECT/SCHOOL EXPERIENCE

YiXing - AI-Driven Personalized Travel Planner   Toronto, ON
Project Lead / Co-Founder   *Jun 2023 - May 2024*
- Led the development of an AI-powered travel planning platform, integrating **custom-trained 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.
- Managed an **agile development team** of six, overseeing the full product lifecycle from concept to MVP launch, conducting code reviews, and optimizing system performance.

ReassurED - AI-Powered Emergency Care Guidance/Navigator   Montreal, QC
Project Lead   *Sep 2024*
- 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 using **Few-shot Learning** with **DeepSeek V3**.
- Built scalable backend services with **FastAPI** for real-time hospital wait times, leveraging web scraping and automated data updates.
- Enhanced user experience with location-based hospital maps using **react-native-maps** and real-time navigation via **expo-location**.
- Led a team through a **24-hour** hackathon, delivering an MVP that improves transparency and efficiency in emergency healthcare workflows.

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 website performance by **optimizing APIs** and implementing **caching strategies**, reducing load times and enhancing overall **user experience**.
- Collaborated within an **agile team** to build and deploy new features, maintain platform stability, and ensure a **seamless, cross-platform experience**.

SKILLS

Programming Languages: Python, JavaScript, C/C++, C#, HTML, Swift, MATLAB
Frameworks & Libraries: React Native, React.js, Node.js, Django, LangChain, OpenCV, YOLO, PyTorch
Cloud & DevOps: AWS (Lambda), Google Cloud Platform, Firebase, Git, CI/CD
Development Tools: VS Code, Xcode, Unity, Fusion 360, Blender, AutoCAD