

# Shuolin (Leo) Yin

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## EDUCATION

### University of Toronto

Bachelor of Applied Science and Engineering in Computer Engineering + PEY Co-op

- Recipient of Faculty Of Applied Science And Engineering Admission Scholarship
- Recipient of Edward S. Rogers Sr. Admission Scholarship

Toronto, ON

Sep 2023 – Apr 2027

## WORK EXPERIENCE

### The Institute of Automation, Chinese Academy of Sciences (CASIA)

Research Assistant under Prof. Yang Yang, Prof. Jinlin Wu and Sr. PD Zhen Chen

Beijing, China

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.

President/Founder

Toronto, ON

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

### YiXing - AI-Driven Personalized Travel Planner

Project Lead / Co-Founder

Toronto, ON

Jun 2023 – May 2024

- Led an **agile development team** of six in building an AI-powered travel planning platform, integrating **TensorFlow** and **GPT-based models** with **React Native** to generate personalized itineraries.
- Designed and implemented a **hybrid AI system** combining **TensorFlow recommendation models** and **RAG architecture**, improving travel suggestion accuracy by **35%** and reducing response time by **90%**.
- Built a **scalable backend architecture** with **AWS Lambda** and **TensorFlow Extended (TFX)**, orchestrating **vector databases** and **ML pipelines** for efficient travel plan generation.

### ReassurED - LLM-Powered Emergency Care Guidance/Navigator

Project Lead

Montreal, QC

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 recommendation 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**.

### IEEE UoFT

Web Team Associate

Toronto, ON

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