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 **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 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 knowledge integration for enhanced diagnosis reliability
- Spearheaded **weekly technical discussions** and authored comprehensive **research documentation**, facilitating knowledge transfer across interdisciplinary teams of **Vertical category 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 **ML-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   Toronto, ON

AI/ML Project Lead / Co-Founder   *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   Montreal, QC

AI/ML Project Lead   *Sep 2024*
- Architected and deploy an LLM-powered healthcare system using **Deepseek-v3** using **React Native (Expo)** and integrated real-time hospital data via **Firestore**, achieving **90%** alignment with standard **Emergency Severity Index**.
- Implemented **Few-Shot Learning** through **curated medical examples**, **JSON schema validation**, and **Chain-of-Thought reasoning prompts**, reducing incorrect classifications by **35%** compared to zero-shot baseline.
- Developed a **hybrid recommendation system** combining LLM outputs with traditional weighting algorithm for hospital suggestions, integrating **real-time wait times**, **distance metrics**, and **facility capabilities** with **95%** user satisfaction rate
- Built scalable **FastAPI** backend processing **100+ concurrent requests/second**, enabling real-time integration between the LLM service and hospital data system with **99%** uptime.

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