

Ruiké (Oliver) Hou

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EDUCATION

University of Toronto

Toronto, Canada

Bachelor of Science in Computer Science Specialist (Co-op); Minor: Statistics

Sept. 2023–May 2027

- Relevant courses: Intro to AI/ML(A-), HCI(A+), Software Engineering(A), Computer Vision(A-), Data Visualization(A), Data Structures & Algorithms, System programming, Linear Algebra, etc.

INTERNSHIP EXPERIENCE

Remeda

Toronto, Canada

AI Engineer Intern

Apr 2026 - Present

- Developed an RLHF framework to fine-tune diagnostic reasoning, achieving a 15% increase in model interpretability scores and reducing false-positive clinical alerts by 22%.
- Engineered a multimodal fusion pipeline (Audio + Text) using PyTorch, processing 5,000+ clinical hours of data and achieving an 89% F1-score in identifying early-stage respiratory anomalies.
- Integrated FHIR & SNOMED-CT standards into the backend, automating documentation for 700+ simulated patient cases and projected to save doctors approximately 1.5 hours of paperwork daily.

Nowcoder Co, Ltd

Shanghai, China

LLM Algorithm/ Full Stack Intern

Jun. 2025 – Aug. 2025

- Fine-tuned LLM prompts to detect AI interview answer completion; achieved up to 90.5% accuracy with Claude-sonnet-4. Train BERT-based classifier for fallback option with 88% acc and 85% recall.
- Developed a screen content classification model using EfficientNet-B3, achieving 98.7% accuracy and 91.3% recall by curating balanced training data and tuning early stopping strategies.
- Build an AI+BI Chatgpt-style conversational platform using Java21 and Vue3. Use GPT-4o API for text2sql with Hologres. Implement auto SQL execute and Echart generation.

Infosys Technology Co., Ltd

Shanghai, China

Database ERP Intern

Apr. 2025 – Jun. 2025

- Gained foundational knowledge of Oracle ERP data flow, core module functions, and key implementation processes, supporting a system deployment impacting 5+ business units.
- Successfully data cleaning and preparation for migration of 50,000+ records, ensuring data accuracy for ERP to go-live.

Shanghai Wangmeng Network Technology Co., Ltd. (Alibaba Group Subsidiary)

Shanghai, China

Software Engineering Intern

May 2024 – Jul. 2024

- Used Maven for project management and dependency resolution, maintaining microservices within the SpringBoot framework, and optimizing cloud efficiency within AWS cloud services.
- Successfully deployed emotion recognition and response functions for customer service interactions by locally deploying the Mistral-7B model, following LoRA fine-tuning with 94.3% Acc.

PROJECT EXPERIENCE

Dual-Channel, Frequency-Guided Reconstruction for Robust Detection of Diffusion-generated

Picture | Researcher (Collaborate with professor Rabih Younes at Duke University) Sep 2025 – Jan 2026

- Developed MB-FIRE, a dual-channel frequency-guided reconstruction framework for robust AI-generated image detection, augmenting mid-band spectral cues with high-pass spatial residuals.
- Engineered a 9-channel ResNet-50 classifier to process concatenated reconstruction error maps from a frozen Stable Diffusion VAE, utilizing FFT-based ring masking and spatial average-pooling
- Achieved a +18.1 macro-average AUROC improvement over SOTA baselines (e.g., FIRE), demonstrating superior cross-model generalization on SDXL, Midjourney, and Kandinsky 3 datasets.

PhysioApp – AI-Integrated Fitness App Dev (Course Project) | Project Leader May 2025 – Aug 2025

- Developed a full-stack fitness application using React, Spring Boot, PostgreSQL, and Docker, generating personalized workout plans tailored to users' injury conditions with CI/CD.
- Integrated the DeepSeek R1 API to implement an AI chatbot that provides real-time fitness guidance and injury prevention advice.
- Responsible for implementing key features such as dynamic muscle highlighting, AI-based workout plan recommendations, and exercise tracking, and rehabilitation monitoring.

SKILLS

Technical skills: Full Stack, JS, Python, Java, React, Vue2, C, SQL, Docker, Linux, AI agent, Prompt Eng.

Certification

2026 SDSS Datathon Participant: Airfare Markets Under Pressure — Analytics Dashboard