

SKILLS

Languages - Python, R, C++, Java, JavaScript, SQL, Typescript, TensorFlow, React, Express
 Technology&Tools- Large Language Models, Transformers, Docker, AWS, PowerBI,

EDUCATION & ACHIEVEMENTS

Nanyang Technological University • Bachelor in Computer Science (Accelerated Bachelor's Programme)	2023-2027 4.46/5
Rahul International School • British Physics Olympiad Bronze Medalist, SOF Maths and English Olympiad Bronze Medalist • 98% Jee Mains	2021-2023 94 % CBSE

EXPERIENCE

Undergraduate Research Experience On Campus NTU • Applying advanced interpretability techniques to deconstruct decision-making pathways in transformer-based RL policies. • Exploring the mechanistic interpretability of RL agents using TransformerLens, focusing on attention head behaviour, circuit tracing, and model alignment to advance transparent AI. • Honoured to present research at ICUR 2025; currently preparing submission for MIT Undergraduate Research Technology Conference.	2024-Present
National Healthcare Group, Singapore • Collaborated with clinicians to develop an AI-based diagnostic tool for early detection of diabetic foot ulcers, targeting 200,000+ diabetic patients in Singapore through an NTU venture project. • Engineered 4 angiosome-specific models and implemented symmetry detection, achieving 93% accuracy in ulcer risk prediction. • Enhanced model interpretability and clinical integration, supporting NHG's mission to deploy explainable AI in hospital workflows and improve preventive care outcomes.	Jan 2025- March 2025 AI Intern

PROJECTS

AuditGen: Multi-Modal Auditing Assistant - <i>Hugging Face Transformers RAG LangChain Pandas Streamlit</i> • Built an intelligent auditing assistant using Retrieval-Augmented Generation (RAG) with a fine-tuned Hugging Face LLM to analyse PDFs, images, and Excel files and generate structured audit reports. • Integrated OCR and table extraction pipelines to handle scanned documents and spreadsheets, improving document ingestion coverage by 90% across diverse audit formats. • Streamlined audit workflows by delivering auto-generated reports with key findings, anomalies, and compliance risks, reducing manual review efforts by 65%
RL-Trader: Regime-Aware Stock Trading using Reinforcement Learning- <i>Python Hierarchical DQN Google Finance API</i> • Developed a regime-aware RL trading agent using PPO, Hierarchical DQN, and Soft-Value G-Learning with KL-regularisation on Google Finance stock data. • Improved cumulative returns by 2.4× over baseline DQN through dynamic policy switching across bullish, bearish, and neutral market conditions. • Benchmarked model robustness across market regimes, achieving a 30–40% reduction in reward variance versus non-regularised agents
MOOC Platform with Cheating Detection Microservice - <i>MongoDB Express.js React Node.js Spring Boot Java REST APIs</i> • Engineered a scalable MOOC platform using the MERN stack, and architected a modular cheating detection microservice in Spring Boot with secure RESTful API integration for real-time, non-invasive behavioural monitoring (tab switches, cursor movement, source URLs). • Pioneered a novel pace anomaly detection algorithm to flag irregular learning patterns, improving cheating detection accuracy by 3.2×. • Deployed an instructor-facing dashboard with auto-generated trust scores, timestamped violations, and source traceability, reducing manual review time by 70%.

CERTIFICATIONS

University Courses - Data Structures & Algorithm Analysis, Data Science & Artificial Intelligence, Object Oriented Programming, Probability and Statistics, Linear Algebra, Operating Systems, Software Engineering, Computer Networks, Computer Architecture
External Certificates - Machine Learning Stanford, Udemy Web development with Mern Stack and Spring Boot, Udemy Figma UI/UX, Network Analysis In Python, TensorFlow for Deep Learning with Python, NLP, Predictive Analysis, Reinforcement Learning, Generative AI's LLM