

# Cheng Yi Xing

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## EDUCATION

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- **Singapore Institute of Technology (SIT)** Penultimate Year  
*Bachelor's of Science in Applied Artificial Intelligence* Aug 2022 – Expected May 2025
  - **Awards:** SIT Scholarship (Full ride), awarded to just 13 students among 3000+ first-year candidates

## EXPERIENCE

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- **Target Media Culcreative (Upcoming Internship)** Singapore  
*Software Engineer Intern* Sept 2024 - April 2025
  - Recruited by COO to integrate a hackathon-winning solution, streamlining internal operations.
  - Leveraged hackathon innovation to secure Target Media's position as the primary DDP provider in Punggol
- **Singapore Institute of Technology** Singapore  
*AI Engineer Intern* May 2024 - Present
  - Contributed to Project LEARN, an initiative to improve student's proficiency in mother tongue through AI
  - Finetuned LLAMA3 using ORPO for marking task, boosting marking accuracy from **60% to 95%** on unseen data
  - Developed synthetic data pipelines, reducing manual data labeling time by **80%** and improving data diversity
  - Engineered LLM prompts to generate context-aware follow-up questions when students answers incorrectly
- **SMRT** Singapore  
*Data Scientist Intern (Industry Project with SMRT)* Jan 2024 - Aug 2024
  - Analyzed and profiled commuter travel patterns, enabling targeted marketing through WINX+ app
  - Constructed a comprehensive feature table for commuter profiling, enabling SMRT to gain deeper insights into travel patterns and facilitating advanced analytics and data science techniques.
  - Optimized ML model, achieving **97.86%** accuracy in identifying 2.35 million tourists among 6.9 million commuters
  - Improved code and memory usage, cutting processing time by **5x** for 200M-record datasets.
- **PropNex Realty Pte Ltd** Singapore  
*AI Development Intern* Jan 2024 - May 2024
  - Worked on AdWords and TemplateAI, internal AI tools enhancing marketing efficiency of **28,000+ agents**
  - Engineered NLP pipelines using langchain and OpenAI GPT models, cutting manual data labelling time by **80%**
  - Architected specialized evaluation pipelines to measure LLM content quality, accelerating review cycles
  - Finetuned OpenAI models for specific project needs, improving pass rates for custom evaluation criteria (e.g., character limits, meeting user-selected options) from **50% to 90%**
- **Singapore Institute of Technology** Singapore  
*Software Engineer* Apr 2023 - Dec 2023
  - Built a web app with ReactJS and Firebase, enabling efficient audio data collection from **1,000+ students**.
  - Led the development of multi-lingual audio-to-text API with OpenAI WhisperAI and FastAPI
  - Optimized ASR model hyperparameters, reducing CER by **10%** and improving **timestamp accuracy by 20%**.

## AWARDS

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- **1st Place: SIT x Target Media x People's Association - BeyondTheScreen** July 2023 - Apr 2024
  - Developed NFC integrated interface using Next.js for users to interact with ads from digital display panels (DDP)
  - Utilised bluetooth scanners to track user interactions with DDPs, and display personalised content
  - Implemented a CMS for advertisers to manage and update content, and track user interaction analytics

## PROJECTS

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- **SpeakerMetrics Pro** Mar 2024 - Apr 2024
  - Created an edge-computing AI-based feedback device for speaker feedback and analysis and presented it at the **1st International Conference on AI Sensors and the 10th International Symposium on Sensor Science**
  - Built a web UI using Next.js for controlling edge devices and displaying post-presentation data.
  - Implemented pose estimation and attention classification models, providing feedback on audience engagement.

## SKILLS AND TECHNOLOGIES

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- **Languages and Libraries::** Python (+ Pytorch, Flask, FastAPI, Pyspark, Selenium, Pandas, NumPy), JavaScript (+ React, React Native, Next.js, Express.JS), Typescript, PHP, Java, C, SQL, NoSQL
- **Technologies::** Firebase, Supabase, Docker, Pinecone, Redis, AWS (S3, EC2, RDS), Hadoop, Spark, HuggingFace