

Haotian (Tim) Tan

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EXPERIENCE

LENOVO LTD. | SOFTWARE ENGINEER INTERN

Aug 2023 – Sep 2023 | Shenzhen, China

- Developed a **chatbot** in Python using **LangChain** with SQL integration and **Flask** backend
- Created a responsive frontend interface using **React** for seamless user interaction

MIRROR EDUCATION SUMMER SCHOOL | MODULAR

SYNTHESIZER COURSE LECTURER

July 2024 | Shanghai, China

- Designed and delivered a course teaching students to build **analog synthesizers** from scratch
- Developed curriculum covering electronic fundamentals, circuit design/sim with CircuitJS, and assembly with breadboard

BOMING VISION TECHNOLOGY CO., LTD. | ENGINEERING

INTERN

Aug 2021 | Zhuhai, China

- Gained practical experience in **machine vision** applications for industrial settings
- Assisted with assembly of defect detection systems and explored computer vision development

PROJECTS

GRANTME - CAMEL-AI HACKATHON | WINNER -

"CONNECTING TO THE WEB" TRACK

Nov 2024 | Oxford, UK

- Co-developed research grant matching system using academic profiles
- Built grant pipeline with **Firecrawl** + **Camel-AI multi-agent orchestration**

SPEEDCODE - REAL-TIME CODING ARENA | CUES

HACKATHON

Nov 2024 | Cambridge, UK

- Co-developed competitive coding platform with **PyQt5** and **Flask**
- Built real-time battle system with **WebSocket** for 2-player matches
- Implemented LeetCode-style question bank with **SQLite** (50+ challenges)

ACADEMIC PROJECTS 2024-2025

- Logistic Regression Classifier:** Implemented gradient descent with non-linear features
- Data Compression (CamZIP):** Built tool using Shannon-Fano, Huffman/Arithmetic coding
- Neural Coding:** Simulated efficient coding principles in visual cortex
- CT Visualization:** Engineered 3D medical data interpolation with Vulkan rendering

EDUCATION

UNIVERSITY OF CAMBRIDGE

B/MENG ENGINEERING

INFORMATION AND COMPUTATIONAL ENGINEERING

Oct 2022 - June 2026 | Cambridge, UK

Est. Grade: 1st/2.i

SHENZHEN COLLEGE OF INTERNATIONAL EDUCATION

A-LEVELS

Aug 2018 - June 2022 | Shenzhen,

China | Final grade A*A*A*

KEY COURSEWORK

Inference & Machine Learning, Statistical Signal Processing, Information Theory & Coding, Systems & Control, Medical Imaging & 3D Graphics, Neuroscience

TECHNICAL SKILLS

PROGRAMMING

• Python • C++ • SQL • React •
Vanilla HTML/CSS • Javascript • Git
• Linux

ENGINEERING

• Machine Learning • Signal Processing • Data Science •
Computer Vision • CAD (SolidWorks, Shapr3D) • LTSpice/CircuitJS

MUSIC

• Logic Pro X • Ableton Live • Analog Synthesis • Audio Engineering

OTHER ACHIEVEMENTS

Internet musical artist accumulating **100k fans** with **300M streams** across various music platforms

LANGUAGES

Mandarin (Native)
English (Proficient)
Cantonese (Intermediate)
Japanese (Beginner)