

Zhiyang Lu

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EDUCATION

National University of Singapore

Jul 2022 – Present

Bachelor of Computing in Computer Science, GPA: 4.86/5.00

Singapore

- **Special Programmes:** NUS College - the honours college of NUS, Second major in Quantitative Finance.
- **Coursework:** Programming Methodology, Data Structures and Algorithms, Computer Organisation, Design and Analysis of Algorithms, Software Engineering, Operating Systems, Introduction to AI and ML

Rangitoto College

Jan 2017 – Nov 2021

International Baccalaureate DP, Grade: 45/45 (Valedictorian / Dux Litterarum)

Auckland, New Zealand

- **Coursework:** Mathematics AA HL, Physics HL, Chemistry HL, English LL SL, History SL, Mandarin SL.
- **Activities:** IBDP NZ Top Scholar, Chinese Night Organisational Committee, Founder of Mathematics Club.

ACHIEVEMENTS

NZ International Mathematical Olympiad Squad Member

2021

New Zealand Mathematical Olympiad Committee

Auckland, New Zealand

- Selected as one of 12 representatives for New Zealand to compete in international level maths Olympiads.
- Honourable Mention in Asian Pacific Mathematical Olympiad, Silver Medal in New Zealand Mathematical Olympiad, Bronze Medal in Australian Mathematical Olympiad.

NZQA Outstanding Scholar

2020 & 2021

New Zealand Qualifications Authority

Auckland, New Zealand

- Ranked top 50 among a national cohort of roughly 160,000 students.
- Outstanding pass in Calculus, Physics, and Chemistry. Scholarship pass in English.

EXPERIENCE

Software Developer

May 2023 – Present

NUS College Impact Experience Programme

Singapore

- Developed a full-stack web application using Python Flask to address healthcare data management for centres based in Kampong Chhnang, Cambodia.
- Designed and implemented a responsive and intuitive interface with HTML and CSS Bootstrap5, ensuring accessibility and facilitating efficient data entry.
- Integrated SQL for robust backend database management with data validation and error handling mechanisms to enhance data retrieval accuracy, security, and reliability.

PROJECTS

InterviewAce AI Technical Interviewer | *Flask, React.js, OpenAI, PyAudio*

Jan 2024 – Present

- Live Coding Environment allows candidates to write, compile, execute, and showcase their coding skills in real-time. Ability to choose the language and font in the virtual IDE.
- AI-driven Speech-To-Text & Text-To-Speech Transcription: Utilises OpenAI and Whisper for highly accurate real-time speech transcription, bridging the gap between verbal communication and digital interaction.
- Live video feedback that records the candidate during the interview. This allows interviewees to observe body language and assess nervousness, providing an accurate simulation of an in-person interview.
- Asynchronous function calls in JavaScript enhance the frontend's responsiveness and efficiency. These calls enable seamless interaction with backend services without blocking the user interface to ensure a fluid user experience.

Monopoly Board Game Simulator | *Java*

Apr 2023 – Jul 2023

- Involves complex class design that demonstrates strong object-oriented programming language understanding through applying relevant OOP concepts such as, inheritance, polymorphism, and encapsulation.
- Acquired comprehensive knowledge and understanding of well-documented standard libraries (Java Standard Library) as well as their wide range of pre-built classes, methods, and data structures.

TECHNICAL SKILLS

Languages: Java, Python, C / C++, JavaScript, HTML/CSS, SQL

Frameworks / Libraries: Flask, NumPy, pandas, PyAudio, Bootstrap5

Developer Tools: GitHub, IntelliJ, CLion, PyCharm, WebStorm, Visual Studio Code, VIM