

# Zhiyang Lu

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## EDUCATION

<b>National University of Singapore</b> <i>Bachelor of Computing in Computer Science @ NUS College, GPA: 4.88/5.00</i> <ul style="list-style-type: none"><li><b>Awards:</b> Dean's List AY23/24 Sem 2, Top Students Award - AI &amp; ML, NUS College International Scholarship.</li></ul>	Jul 2022 – Present <i>Singapore</i>
<b>Rangitoto College</b> <i>International Baccalaureate DP, Grade: 45/45 (Valedictorian / Dux Litterarum)</i>	Jan 2017 – Nov 2021 <i>Auckland, New Zealand</i>

## ACHIEVEMENTS

<b>NZ International Mathematical Olympiad Squad Member</b> <i>New Zealand Mathematical Olympiad Committee</i> <ul style="list-style-type: none"><li>Selected as one of 12 representatives for New Zealand to compete in international level maths olympiads.</li><li>Honourable Mention in Asian Pacific Mathematical Olympiad, Silver Medal in New Zealand Mathematical Olympiad, Bronze Medal in Australian Mathematical Olympiad.</li></ul>	2021 <i>Auckland, New Zealand</i>
<b>NZQA Outstanding Scholar</b> <i>New Zealand Qualifications Authority</i> <ul style="list-style-type: none"><li>Ranked top 50 among a national cohort of roughly 160,000 students.</li><li>Outstanding pass in Calculus, Physics, and Chemistry. Scholarship pass in English.</li></ul>	2020 & 2021 <i>Auckland, New Zealand</i>

## EXPERIENCE

<b>DRW Holdings</b> <i>Incoming Software Developer Intern</i>	May 2025 – August 2025 <i>Singapore</i>
<b>Octava Digital Assets</b> <i>Quantitative Developer Intern</i> <ul style="list-style-type: none"><li>Researched and developed crypto asset trading strategies ranging from technical forecasts, sentiment analysis, and regression/machine learning approaches.</li><li>Established an efficient and comprehensive pipeline to evaluate trading strategy performance which integrates into the existing portfolio allocation infrastructure.</li><li>Conducted extensive analysis on macro factors that potentially influence the price action of crypto portfolios.</li><li>Deployed a cloud-based application that monitors daily price movements, generates a PDF containing statistics and visualised charts, and emails the portfolio performance report to investors.</li></ul>	May 2024 – August 2024 <i>Singapore</i>

## PROJECTS

<b>CryptograFace, Encryption via Facial Biometrics</b>   <i>C++, Python, OpenCV, Dlibs, MediaPipe, Crypto++, Qt</i> <ul style="list-style-type: none"><li>Stores a directory of text-based information and visual digital canvases created by tracking user hand gestures and finger movements within a live camera feed.</li><li>Encrypts user data using the Advanced Encryption Standard, ensuring confidentiality and authenticity.</li><li>Facial biometrics authentication system ensures high precision by employing deep learning models.</li><li>Dynamic graphical user interface built with multi-threaded architecture to guarantee responsiveness.</li></ul>
<b>InterviewAce, AI Technical Interviewer</b>   <i>Python, Flask, React.js, OpenAI</i> <ul style="list-style-type: none"><li>Live Coding Environment allows candidates to write, compile, and execute code in real-time.</li><li>AI-driven transcription achieves real-time language processing to create immersive interview experience.</li><li>Optimised platform responsiveness with advanced audio libraries and efficient asynchronous JavaScript calls.</li></ul>
<b>Medical Management System</b>   <i>Python, Flask, MySQL, HTML, Bootstrap5</i> <ul style="list-style-type: none"><li>Deployed full-stack web application currently in use by health-centres based in Kampong Chhnang, Cambodia.</li><li>Designed a responsive and intuitive interface, ensuring accessibility and facilitating efficient data entry.</li><li>Integrated SQL for robust backend database management with data validation and error handling mechanisms.</li></ul>

## TECHNICAL SKILLS

**Languages:** C / C++, Java, Python  
**Frameworks / Libraries:** OpenCV, Qt, Flask, NumPy, pandas, scikit-learn, PyTorch, Matplotlib  
**Developer Tools:** GitHub, CLion, IntelliJ, PyCharm, Visual Studio Code, VIM