

# Jeriel Chan Zhi Yang

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## EXPERIENCE

### **Software Engineer @ Omega Education, December 2023 - Present | Part-Time**

- Collaborated with a team to build a gamified coding platform intended to enhance collaboration between coders.
- Worked with Tech Lead to design UI/UX on Figma and converted to frontend on Phaserjs Framework
- Created maps, scoring system and stem and IDE integration
- Utilised Colyseus Multiplayer Framework to manage server-client state synchronisation, such as movements and chat.

### **Head of Omega Studios, Founding Team @ Omega Education, January 2023 - Present | Part-Time**

- In Charge of Marketing, Non-profit subsidiary
- Increased organic follower count on Instagram by >500 followers in 3 weeks
- Working with NUS Computing to provide coding lessons for the underprivileged

### **Front-End Developer @ Sheares Hall, May 2023 - February 2024 | Part-Time**

- Contributed to a mobile application tailored for Sheares Hall, to enhance the resident experience by providing essential services
- Engineered an events highlights and events details page, enabling residents to access information on daily activities and key events.
- Created carousel components that shows the event's pictures, title, and descriptions.
- Utilised React Native and TailwindCSS for frontend

## EDUCATION

### **National University of Singapore**

Bachelor of Computing in Computer Science and Mathematics 2nd Major. Graduating in May 2026

## TECHNICAL PROJECTS

### **Hangar Telegram Bot @ NUS Enterprise | Developing a hotdesking telegram bot for NUS enterprise**

### **NexusWrap @ NUS Fintech Summit Hackathon 2024 | 3rd Place**

- Address the issue of interoperability of cross-chain transactions
- Developed a full-stack Bank-to-Bank / User-to-User simulated conditional token-wrapping and atomic swap web prototype inspired by the XRP inter-ledger protocol
- Engineered using Next.js for the frontend, Express.js for backend services, Docker for containerization, ensuring scalability and PostgreSQL for data management.
- Researched and pitched business aspect

### **TriveTribe @ NUS GDSC Hack4Good Hackathon |**

- Ideate and developed a gamified volunteer tracking platform, enhancing engagement through events, XP, and achievement badges with feedback mechanisms to measure impact of social good.
- Designed UI/UX using Figma
- Developed Frontend features
- Utilized Next.js, Flask, NLTK, and Pocketbase, worked with a team for front-end, back-end, and database development.

### **Smart Personal Assistant (SPA) @ Orbital NUS 2023 |**

- Developed a Flutter productivity mobile application that integrates multiple daily-use applications into one platform, reducing the need for managing multiple applications
- Incorporated a Kernel model using TensorFlowLite to suggest an optimal sequence of tasks
- Developed an Artificial Intelligence chatbot using rule-based mechanics and ChatGPT API
- Engineered To-Do List, Calendar and Timer functions
- Designed UI/UX wired frames using Figma

### **Q.Now @ IEEE INTUition v8.0 Hackathon 2022 | Hackathon Champions**

- Developed a MedTech Flutter mobile application that simulates and weighs the waiting time of private and public clinics in Singapore, to improve long wait times during Covid-19
- Developed a predictive analysis model in Python for market projections
- Conducted user consensus survey and market research justifying the need for our application

**Web Forum |** Developed a webforum using Typescript, Ruby on Rails, PostgreSQL, Restful API

**Weather Forecast Website @ Hack&Roll Hackathon 2023 |** Developed a Weather Forecast Website using HTML & CSS

**Personal Website** | Used HTML, CSS and JavaScript  
**IOS To-Do List Application** | Developed an IOS To-Do List Application using Swift  
**EliteWeightVest UIUX** | Designed UIUX on Wix.com for my personal small business' website

## SKILLS

### Languages

Java • JavaScript • HTML • CSS • Python

### Libraries, Frameworks, Tools

PostgreSQL • Git • React • Figma • TensorFlow(Lite) • Flutter

## CERTIFICATIONS

**UNITY 3D Basic Game Workshop @ NTU CSEC** | Developed a 3D shooter zombie apocalypse game using C#  
**Programming Intelligence with m3Pi Robots @ NTU CSEC** | Programmed Pololu m3Pi robots to solve mazes using C  
**Micro:bit Basics @ ACJC** | Created a "Dodge the Asteroid" game on a 5x5 screen using Scratch

## ACHIEVEMENTS

### Competitions

**NUS Fintech Summit 2024** | 3rd Place, Northern Trust Track  
**IEEE iNTUition v8.0 Hackathon 2022** | Hackathon Champions  
**Singapore Math Olympiad** | Bronze (2016, 2017)  
**Hwa Chong Maths Challenge 2017** | 3rd Team Placing, Team Leader

## MISC

### Leadership

#### Officer Commanding (NS) @ *Special Operations Command* |

- Led 60 troopers for anti-rioting, counter-terrorism, and policing duties across two one-month long reservist cycles.

#### Director of Operations @ *NUS Entrepreneurship Society* |

- Managed a team of 9 Operations Executive, planned and assigned roles and duties to the operation team, streamlining event planning and execution.  
- Planned and executed event flow, including mentorship & IMDA workshops, networking sessions, mock & final pitches, and appreciation & award ceremony. Made an Event e-Booklet using Canvas and managed a participants Telegram channel to provide participants with comprehensive event information. Managed participant registration and coordination via EventBrite.  
- Managed the event's finances, including budgeting, setting ticket prices and procurement of merchandises & logistics.

#### Deputy Head of Community Student Leaders @ *Fairfield Methodist Secondary* |

- Planned and orchestrated local and overseas volunteering initiatives, both school-sponsored and student-driven.  
- Planned National Day events and Racial Harmony events as Head of National Education.

### Volunteering Experience

#### Coding Curriculum Planner & Head Tutor @ *Code 4 Community, Centre for Computing for Social Good & Philantropy* |

- Partnering with Code 4 Community to plan and conduct non-profit lessons  
- Collaborating with Ulu Pandan Stars to provide long-term coding lessons for the underprivileged.

#### Lion Befrienders | Organised a elderly community bonding session with ACJC students

#### Willing Hearts | Cooked and delivered free meals to beneficiaries

#### Handicapped Welfare Association | Volunteered for flagship fundraising

#### Activities for Disadvantaged Children (Committee Member) partnered with Central Singapore Community Development Council

#### Blessing Students @ National Library, Blessing Foreign Workers | Self-Led

#### Befriending the Elderly of Dover Road

#### FLEX WEEK: 1 week of VIA for every FMSS student (Chairperson of Project Committee)

#### Racial Harmony Day Programme @ FMSS | Programme Planner

#### Intergenerational Learning Programme @ *Family Central*

#### Intergenerational Learning Programme @ *Fei Yue Community Services*

#### St Andrew's Cathedral Home for the Aged

#### School Cleanliness Project (2014 & 2015)

#### Teaching the Elderly about Facebook @ *Family Central*

### Overseas Community Involvement Programmes

#### Xiamen

- Conducted English and cultural exposure classes to Chinese Students in Xiamen.

#### Phnom Penh

- Conducted English classes and career exposure workshops for the underprivileged children in the outskirts of Cambodia, Phnom Penh.  
- Built huts out of banana wood and leaves for the villagers.

**Co-Curricular Activities****Lego Mindstorm Robotics |**

- Used Lego Mindstorm block programming from primary to secondary school to programme Lego robots.
- Participated in the National Junior Robotics Competition and Robofest.

**Volleyball |**

- Participated in A'Division

**Entrepreneurship****Small Business Owner @ EliteWeightVest, June 2021 - August 2022**

- A small business selling workout equipments, mainly weighted vests, during circuit breaker when all gyms were closed
- Managed digital marketing, sales, product procurement, search engine optimisation

**Mathematics Olympiad Private Tutor November 2021 - August 2022**