

Julius Gwee Chyi Han

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PERSONAL STATEMENT

I am a Computer Science undergraduate at the National University of Singapore who enjoys turning ambiguous user needs into practical, dependable software. At Urbanflow, I work on an image-to-geometry computer vision pipeline and file-management capabilities for an artificial intelligence-assisted urban-design platform. I have also built a real-time collaborative coding system, a multilingual voice-first public-service kiosk, and a customer-engagement tool used across more than 200 engagements. These experiences have strengthened my ability to move between product thinking, backend and frontend engineering, and rapid experimentation while communicating with technical and non-technical stakeholders. Beyond engineering, managing an annual student-government budget exceeding S\$100,000 has taught me accountability, prioritisation, and collaborative leadership. I am seeking an international internship where I can take ownership, learn quickly from a diverse team, and contribute to products that combine strong engineering with meaningful real-world use.

EDUCATION

National University of Singapore <i>Bachelor of Computing in Computer Science GPA: 4.19/5.00</i>	Aug. 2024 – Expected 2028 <i>Singapore</i>
Hwa Chong Institution (Singapore) <i>Singapore-Cambridge General Certificate of Education A-Levels 85/90 rank points</i>	Jan. 2016 – Dec. 2021

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Structured Query Language (SQL), Visual Basic for Applications
AI and Computer Vision: Computer vision, image processing, geometry extraction, Cloudflare Workers AI, SEALion
Application Engineering: React, Next.js, Vite, Tailwind CSS, Monaco Editor, Node.js, Express, Socket.IO, Yjs/y-monaco, Supabase
Infrastructure and Data: Redis, RabbitMQ, Cloudflare D1, R2, key-value storage, Docker, Nginx, GitHub Actions, AWS ECS, Git, Vercel

EXPERIENCE

AI Engineer Intern <i>Urbanflow - AI-assisted sustainable urban and building design platform</i>	June 2026 – Present <i>Singapore</i>
- Developed and integrated an image-to-geometry computer vision pipeline that converts site-layout sketches into application-ready geometry for in-app design proposals. - Built file-management capabilities supporting the storage, organisation, and retrieval of project artefacts across proposal workflows.	
Freelance Software Developer <i>Strategic Alliance</i>	Oct. 2025 – Jan. 2026 <i>Singapore</i>
- Served as sole developer of a customer-engagement system used across more than 200 engagements, supporting lead tracking and follow-up workflows with an approximately 70% client-reported conversion rate. - Worked directly with non-technical stakeholders to translate operational pain points into usable internal software tooling.	
Data Migration Specialist <i>Grandtag Financial Consultancy</i>	Mar. 2024 – July 2024 <i>Singapore</i>
Built Visual Basic for Applications and JavaScript data-collection and processing utilities while maintaining more than 1,000 client profiles.	

SELECTED PROJECTS

PeerPrep | *Full-Stack Engineer*

Jan. 2026 – Apr. 2026

- Built a real-time collaborative coding editor using React, TypeScript, Monaco Editor, Yjs/y-monaco, and Socket.IO.
- Designed a RabbitMQ and Redis collaboration service with Supabase-authenticated joins, per-user tokens, session creation, and debounced state snapshots.
- Implemented conflict-free replicated data type synchronisation with full-document state for joins and reconnects, incremental update broadcasts, participant presence, reconnect handling, and session cleanup.
- Persisted attempt history and handled explicit leaves to support reliable pair-programming workflows.

Kawan | *Developer, The Good Hack 2026*

May 2026

- Built a multilingual voice-first public-service kiosk for elderly residents in Singapore public-housing estates using Next.js, TypeScript, Cloudflare Workers, Workers AI, SEALion, D1, R2, and key-value storage.
- Implemented triage flows that turn resident requests into structured context for agency signposting or volunteer escalation.
- Won “Ah Gong, Ah Ma’s Favourite”, the audience-voted award at The Good Hack 2026.

CritterLog | *Co-Founder and Lead Developer*

Jan. 2026 – Present

- Led a modular React architecture that scales Singapore wildlife content through JavaScript Object Notation configuration rather than code changes.
- Implemented wildlife-interaction state, discovery tracking, and separated rendering, state, and interface layers for maintainable feature expansion.
- Worked with a designer to turn the concept into a deployable minimum viable product while balancing educational content with interaction design.

LEADERSHIP AND COMMUNITY

Finance Director

Mar. 2026 – Present

Temasek Hall Student Government, National University of Singapore

Singapore

- Manage and allocate an annual operating budget above S\$100,000 for hall-wide events, student groups, and facilities.
- Work with the executive committee to prioritise funding and maintain accountability across student-led initiatives.

Committee Head

June 2025 – May 2026

Temasek Hall Xperience - experiential-events programme for final-year residents

Singapore

- Led teams spanning programming, logistics, marketing, and creative execution for events serving more than 200 participants.
- Oversaw event budgets, sponsorship coordination, and prize procurement while maintaining delivery standards under tight timelines.

Core Team Member

Jan. 2019 – Dec. 2019

Project Integrate 4.0 with HealthServe Singapore - migrant-worker community initiative

Singapore

- Helped lead a 150-volunteer project that received Best in Category, Second Overall, and High Distinction.
- Designed and delivered initiatives with HealthServe Singapore to foster community engagement and integration.

National University of Singapore
Unofficial Transcript

NAME:		JULIUS GWEE CHYI HAN		STUDENT NO.:		A0309085B		DATE OF BIRTH:		16/07/2003		DATE ISSUED:		14/07/2026																					
PROGRAMME:				BACHELOR OF COMPUTING (COMPUTER SCIENCE)				COURSE				GRADE				UNITS																			
PROGRAMME STATUS:				ACTIVE IN PROGRAMME				ST2334				PROBABILITY AND STATISTICS				B		4.00																	
								BACHELOR OF COMPUTING (COMPUTER SCIENCE)																											
								GRADE POINT AVERAGE: 4.13																											
COURSE								GRADE								UNITS																			
ACADEMIC YEAR 2024/2025 SEMESTER 1																		ACADEMIC YEAR 2025/2026 SEMESTER 2																	
CFG1002				CAREER CATALYST				CS				2.00				CFG1004				FINANCIAL READINESS FOR YOUNG PROFESSIONALS				CS				2.00							
CS1101S				PROGRAMMING METHODOLOGY				S				4.00				CS2109S				INTRODUCTION TO AI AND MACHINE LEARNING				B+				4.00							
CS1231S				DISCRETE STRUCTURES				S				4.00				CS3219				SOFTWARE ENGINEERING PRINCIPLES AND PATTERNS				A-				4.00							
ES2660				COMMUNICATING IN THE INFORMATION AGE				B+				4.00				GEC1041				CRIME FICTION AND FILM ACROSS SPACE & TIME				A+				4.00							
GEA1000				QUANTITATIVE REASONING WITH DATA				S				4.00				IS1128				IT, MANAGEMENT AND ORGANISATION				B+				4.00							
MA1522				LINEAR ALGEBRA FOR COMPUTING				B+				4.00																							
				BACHELOR OF COMPUTING (COMPUTER SCIENCE)																BACHELOR OF COMPUTING (COMPUTER SCIENCE)															
				GRADE POINT AVERAGE: 4.00																GRADE POINT AVERAGE: 4.19															
ACADEMIC YEAR 2024/2025 SEMESTER 2																		*****END OF TRANSCRIPT*****																	
CS2030S				PROGRAMMING METHODOLOGY II				B+				4.00																							
CS2040S				DATA STRUCTURES AND ALGORITHMS				B-				4.00																							
IS1108				DIGITAL ETHICS AND DATA PRIVACY				B+				4.00																							
IS2238				ECONOMICS OF IT AND AI				B+				4.00																							
MA1521				CALCULUS FOR COMPUTING				S				4.00																							
SFI2034				INTRODUCING THAILAND (WITH INTRODUCTORY THAI)				A				4.00																							
				BACHELOR OF COMPUTING (COMPUTER SCIENCE)																															
				GRADE POINT AVERAGE: 4.00																															
ACADEMIC YEAR 2025/2026 SEMESTER 1																																			
CS2100				COMPUTER ORGANISATION				B+				4.00																							
CS2101				EFFECTIVE COMMUNICATION FOR COMPUTING PROFESSIONALS				A-				4.00																							
CS2103T				SOFTWARE ENGINEERING				A-				4.00																							
DTK1234				DESIGN THINKING				A				4.00																							

National University of Singapore Grading Legend

Undergraduate academic performance is measured by grade points on a 5.00-point scale.

Grade	Grade Point	Description
A+ / A	5.00	Exceptional / Excellent
A-	4.50	Very good
B+	4.00	Good
B	3.50	Satisfactory
B-	3.00	Fair
C+	2.50	Pass
C	2.00	Pass
D+	1.50	Marginal Pass
D	1.00	Marginal Pass
F	0.00	Fail

Additional transcript grades: S = Satisfactory; U = Unsatisfactory; CS = Completed (Satisfactory); CU = Completed (Unsatisfactory). These grades do not carry grade points.

Official source: [NUS Registrar - Academic Structure and Grading](#) | Accessed 14 July 2026

This page is a concise summary for interpreting the attached National University of Singapore transcript.