

Lee Tse Hsien, Shaun

+65 8878 7628 | shaunlee@u.nus.edu | [linkedin.com/in/Shawn-lee231/](https://www.linkedin.com/in/Shawn-lee231/) | www.github.com/hoodini231

EDUCATION

National University of Singapore

Bachelor of Computing in Computer Science

GPA: 4.3 / 5.0

Relevant work: **CS1101S: Programming Methodology Teaching Assistant** AY 24/25

Relevant coursework: Database Systems, Software Engineering, Algorithm Design.

Singapore

August 2023 – May 2027

EXPERIENCE

Software Developer Intern

Central Provident Fund Board

Singapore

January 2025 – Present

- Led end-to-end development and **deployment of 4+ Java batch jobs using Java, JCL, JSL, and Spring Batch**, automating data processing workflows, reducing manual intervention, and enhancing enterprise application efficiency.
- Utilized **SQL, JCL, and API services** to interact with **IBM DB2 mainframe databases**.
- Developed and deployed **40+ unit tests**, achieving a minimum of **95% code coverage**, and conducted **data patching** to ensure data integrity.
- Conducted **SIT** and **UAT** activities across 3+ major projects, incorporating user feedback to deliver solutions that met evolving business needs.
- Collaborated within an **Agile team**, participating in weekly stand-ups while working cross-functionally to drive **end-to-end development** and deliver integrated solutions.

Projects

Turtogotchi | Flutter, Dart, Firebase, Git

July 2024 – December 2024



- Secured 9000 dollars in funding and **Animal Advocacy award recipient** from the Society for the Prevention of Cruelty to Animals (SPCA) and **Award recipient** and out of 140 teams in Singapore's Defence Science and Technology Agency's Brainhack.
- Built a virtual pet **mobile game** to spread awareness and financial support about local conservation efforts.
- Led a team of 3** to construct and architect a core **back-end system**, establishing efficient infrastructure for the entire application with **Firebase**.
- Leveraged **Dart** to create front-end interfaces, integrating over 20 assets to deliver an engaging user experience.

Online Accessible Tic-Tac-Toe | Next.js, Node.js, WebSockets, MongoDB

October 2024 – November 2024



- Engineered a real-time multiplayer Tic-Tac-Toe game with **Next.JS** with enhanced **accessibility** (WCAG 2.1 Level AA), integrating ARIA labels, text-to-speech, and keyboard navigability for an inclusive user experience.
- Deployed a **monolithic API backend server** to communicate with **MongoDB** hosted with **Render**.
- Implemented **WebSockets** to deliver real-time multiplayer gameplay experience between online players.
- Optimized game state management with in-game data analytics and history as well as user authentication, enabling persistent profiles, anonymous guest play, and secure login features.

Volunteer Management Platform | React, MongoDB, Node.js, Express, Git

February 2024 – March 2024



- Built a **full-stack** volunteer management platform to streamline recruitment and retention, addressing key engagement challenges of NPO's.
- Implemented a **RESTful API with Node.js and Express**, interlinking front-end components in **React** with **MongoDB**, ensuring robust data handling and user interactions.
- Employed **Postman** and manual unit testing to ensure robustness of API calls with 100 percent coverage.
- Utilized **React**, Material-UI, **JavaScript**, CSS, Bootstrap, and **TypeScript** for **front-end development**.

TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, Dart, React.

Frameworks: MongoDB, NodeJS, JUnit, Firebase, IBM DB2, Java Spring Batch Processing.

Methodologies: Sprint Software Development Lifecycle, UML & ERD Diagrams, RTC IBM Engineering Workflow.

To Whom It May Concern,

I am delighted to offer this letter of recommendation for Lee Tse Hsien, Shaun. Having directly overseen Shaun in his ongoing internship at the Central Provident Fund Board (CPF Board), I have observed his technical competence, analytical skills, and professional growth.

During his tenure, Shaun was responsible for:

- Processing and managing data on IBM DB2 RDBMS
- Developing Batch Processing jobs using Java, JCL, JSL, and Spring Batch
- Conducting unit, system integration, and user acceptance testing

Shaun has demonstrated strong problem-solving skills and proven to be trustworthy. Beyond his technical abilities, he has maintained a hard-working attitude while taking full ownership of his tasks, ensuring that projects are completed to a high standard. His problem-solving mindset, combined with a proactive approach, allows him to navigate issues effectively.

Always eager to learn, Shaun seeks out opportunities for self-improvement by taking on tasks to enhance his expertise and assist the team in achieving our objectives. Additionally, he is an excellent communicator and team player, supporting his colleagues when necessary.

I am confident that Shaun will bring the same level of creativity, ownership, and excellence to any future endeavors.

Should you have any questions or concerns regarding this matter, please do not hesitate to contact me at lim_chee_keong@cpf.gov.sg.

Sincerely,



Chee Keong LIM
Senior Deputy Director (Applications)
Central Provident Fund Board

National University of Singapore

Unofficial Transcript

NAME: SHAUN LEE TSE HSIEN **STUDENT NO.:** A0273706B **DATE OF BIRTH:** 23/01/2002 **DATE ISSUED:** 25/02/2025

PROGRAMME: BACHELOR OF COMPUTING (COMPUTER SCIENCE)
PROGRAMME STATUS: ACTIVE IN PROGRAMME

<u>COURSE</u>		<u>GRADE</u>	<u>UNITS</u>
CS2101	EFFECTIVE COMMUNICATION FOR COMPUTING PROFESSIONALS	B+	4.00
CS2102	DATABASE SYSTEMS	A-	4.00
CS2103T	SOFTWARE ENGINEERING	B	4.00
DMX1101	DESIGN YOUR OWN COURSE	CS	1.00
DMX1102	DESIGN YOUR OWN COURSE	CS	1.00
UTS2409	MENTAL WELLNESS: LOCAL AND GLOBAL APPROACHES	B	4.00

<u>COURSE</u>		<u>GRADE</u>	<u>UNITS</u>
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ACADEMIC YEAR 2023/2024 SEMESTER 1

CFG1002	CAREER CATALYST	CS	2.00
CS1101S	PROGRAMMING METHODOLOGY	A	4.00
CS1231S	DISCRETE STRUCTURES	S	4.00
ES2660	COMMUNICATING IN THE INFORMATION AGE	A	4.00
MA1521	CALCULUS FOR COMPUTING	S	4.00
UTC1416	JR SEM: GAMES, GAME COMMUNITIES AND SOCIETY	CS	4.00

BACHELOR OF COMPUTING (COMPUTER SCIENCE)
GRADE POINT AVERAGE: 5.00

ACADEMIC YEAR 2023/2024 SEMESTER 2

CS2030S	PROGRAMMING METHODOLOGY II	B+	4.00
CS2040S	DATA STRUCTURES AND ALGORITHMS	B+	4.00
IS1108	DIGITAL ETHICS AND DATA PRIVACY	S	4.00
MA1522	LINEAR ALGEBRA FOR COMPUTING	S	4.00
UTW1001Q	ENGLISH, SINGLISH AND INTERCULTURAL COMMUNICATION	A	4.00

BACHELOR OF COMPUTING (COMPUTER SCIENCE)
GRADE POINT AVERAGE: 4.60

ACADEMIC YEAR 2024/2025 SEMESTER 1

CFG1003	FINANCIAL WELLBEING-INTRODUCTION	CS	-
CFG1004	FINANCIAL WELLBEING - ART AND SCIENCE OF INVESTING	CS	2.00
CP2106	INDEPENDENT SOFTWARE DEVELOPMENT PROJECT (ORBITAL)	CS	4.00
CS2100	COMPUTER ORGANISATION	A-	4.00

BACHELOR OF COMPUTING (COMPUTER SCIENCE)
GRADE POINT AVERAGE: 4.30

*****END OF TRANSCRIPT*****