

# ALSON LEE JIAN YANG

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## TECHNICAL SKILLS

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**Programming Languages** | Python, JavaScript, TypeScript, Java, HTML, CSS, SQL, MATLAB, Microsoft VBA, C, R

**Frameworks** | React, TailwindCSS, Bootstrap, Phaser.js

**Developer Tools** | Vite, Next.js, Jest, Linux/Unix, Shell, Flask, PowerAutomate

**Cloud & DevOps** | Git/GitHub, Vercel, AWS (Amplify, Lambda, Cognito, DynamoDB, S3), cURL

**Visual Design** | Arduino, Fusion360, Tiled

## EXPERIENCE

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### Founding Software Engineer, VisEyeQ – Singapore

Feb 2025 — Present

*VC-backed AI startup revolutionising warehouse safety powered by IoT*

Typescript | React | TailwindCSS | Vite | AWS

- Developed a **B2B SaaS cloud-based dashboard** analysing data from IP cameras, IoT wearables and ML models
- Integrated IoT-enabled wearables with frontend using **custom APIs** via AWS API Gateway
- Engineered **secure authentication** using AWS Cognito with email & Google OAuth
- Built AWS Lambda functions to compute **injury cost savings and ROI**
- Managed **persistent** user/incident data with AWS DynamoDB; streamed video from AWS S3

### Open Source Contributor, Source Academy – Singapore

Jan 2025 — May 2025

*Online programming environment and visual debugger to teach programming classes*

TypeScript | React | Jest

- Implemented **7 bugfixes** and **3 new features** used by 1,200+ undergraduates
- Co-developed **CSE Machine**, a Source-to-JavaScript interpreter
- Engineered core features: **control flow**, **instruction order**, and **built-ins**
- Wrote **10 high-coverage Jest test cases** for unit/integration testing
- Selected presenter at **NUS STePS conference**

## TECHNICAL PROJECTS

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### Shift Happens – Puzzle Platformer Game

May–Jul 2025

*2D puzzle-platformer roguelite game with scaling difficulty and powerups*

JavaScript | Phaser.js | Tiled | Vite | Vercel

- Designed **8 puzzle levels**, **6 core gameplay mechanics** and **5 unique power-ups** for addictive gameplay
- Developed **level scaling logic** based on player performance (time taken, number of deaths)
- Built a **level editor workflow** using Tiled custom properties, allowing Phaser to dynamically interpret object logic
- Implemented player feedback features including **knockback**, **health UI**, **animations**, and **contextual sound effects**
- Resolved complex physics issues by applying **manual collision handling and fine-tuning drag, gravity, and velocity**

### Sudoku Solver – Game Web App

Dec 2024

*Web app to play and solve Sudoku puzzles*

JavaScript | Python | Flask | Bootstrap | HTML | CSS

- Developed a Sudoku game with an **integrated backtracking solver engine**
- Implemented **DFS-based algorithm**, supporting puzzles exceeding difficulty 11.0

## EDUCATION

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### National University of Singapore (NUS), Bachelor of Computing, Computer Science (Hons)

Aug 2024 — Present

- NUS Merit Scholar (Top <5.0%) | Current GPA: 4.88 / 5.00 (First Class Honours)

### Hwa Chong Institution (HCI), GCE 'A' Levels

Jan 2020 — Dec 2021

- AAA/AAA in Physics, Chemistry, Mathematics, Economics, General Paper, Project Work | H3 Chemistry Merit
- Hwa Chong Diploma with Distinction | MOE Edusave Scholarship for Independent Schools (ESIS) Scholar

## ADDITIONAL INFORMATION

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**Languages** | English, Mandarin (both spoken and written), Japanese (JLPT N4)

**Interests** | Entrepreneurship, Reading, Solving puzzles, Hunting for good food