Shijie Gan

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WORK EXPERIENCE | INDUSTRIAL PROJECTS

Trontal Group

Full Stack Engineer · Full Stack & Charting Engineer   July 2025 - Present

- Built and shipped features rapidly at an early-stage blockchain quantitative trading startup (https://chart.kiyotaka.ai), taking full ownership from system design to deployment.
- **Promoted to Charting Engineer** with ownership of core charting library and platform infrastructure, demonstrating technical leadership in a fast-paced blockchain startup.
- Architected and built the entire live collaboration system from scratch, implementing real-time updates via WebSockets, session management, and live chat functionality.
- **Sole developer** of multiple **platform-critical features** including guest access system, Progressive Web App (PWA), in-app notifications and push notifications for mobile devices.
- Thrived in an early-stage quant finance startup, gaining experience blockchain, cryptocurrency markets, and quantitative trading systems.

Ant International

Backend Engineer   Nov 2024 - Mar 2025

- Participated in multiple critical projects, including the merchant registration system, non-insured refund project, and merchant OTP system.
- Developed backend and middleware components using Sofaboot, Spring Boot, message brokers, job scheduling, and dynamic resource configuration.
- Focused on security and risk management, applying Ant's three golden rules: grayscale strategies, monitoring, and emergency response.
- Gained valuable insights into the acquiring and payments ecosystem, including strategies for managing large-scale traffic during high-demand events like 11.11.
- Selected for a business trip to attend Ant International's global event in Hangzhou, China; gained business exposure while working onsite at Ant HQ and Alibaba's Xixi campus.
- Collaborated cross-functionally with teams from China and Singapore in a high-intensity, fast-paced engineering culture.

iFAST Corporation Ltd.

Full-Stack Software Engineer   Nov 2023 - Feb 2024

- Contributed to the development and maintenance of the iFAST Global Bank platform (https://www.ifastgb.com) with a focus on full-stack web development.
- Collaborated on a back-office email service project alongside a senior developer.
- Built and integrated RESTful APIs using Spring Boot and implemented frontend features using Angular.
- Resolved bugs and improved application stability to enhance user experience.
- Practiced industrial Scrum methodology through daily stand-ups and sprint planning.
- Worked with UI/UX teams to translate user requirements into system designs and actionable components.
- Participated in the KitaHack hackathon and engaged with other interns to promote innovation and collaboration.

EDUCATION

Monash University

Bachelor Degree of Computer Science - 3.97490.15100   Oct 2022 - Jul 2025

- Achieved the Monash High Achiever Award.
- Highest scorer in multiple academic subjects, including 100% score in Python Development & Mobile Application Development.
- Won 1st Place in the AI Pac-Man Challenge across campuses in Malaysia and Australia.

Imperial College London

Certificate of Higher Education in Mechanical Engineering   Oct 2019 - Jul 2022

- Received Recognition for Excellence in Design and Manufacture.
- Ranked in the top 10% of the cohort in several examinations.

Taylor's College

Cambridge A-Levels - 4   Jan 2018 - Jul 2019

- Recognized for A-Level's High Achiever.
- Awarded with Taylor's Merit Scholarship.

PERSONAL PROJECTS

Personal Portfolio Website [↗]   Jun 2025 - Jul 2025
Built a personal portfolio website using Next.js, TypeScript, and Framer Motion, featuring glassmorphism, smooth animations, and a responsive UI to showcase my software engineering journey.

AI Chatbot Platform [↗]   Jun 2024 - Jun 2025
Designed and developed an AI-powered chatbot platform that empowers businesses and individuals to create and deploy custom chatbots with ease. Users can upload documents (PDF, Word, Excel, Text), which are processed using Retrieval-Augmented Generation (RAG) techniques and indexed in a FAISS vector database. The platform trains a tailored chatbot based on the uploaded content, enabling users to embed it seamlessly into websites via a simple HTML <iframe> tag. Intelligent responses are generated using OpenAI's ChatGPT API, ensuring accurate and context-aware interactions.

Chrome Extension - Quickie [↗]   Apr 2025 - Apr 2025
Developed Quickie, a one-click Chrome extension using Manifest V3 and the Chrome Extensions API. It enables instant access to browser actions including tab management, scrolling, site settings, cookie settings, and QR code generation, enhancing productivity without the need for shortcuts or menus.

Pac-Man AI   Sep 2024 - Oct 2024
Designed and implemented intelligent AI agents to play Pac-Man using A search with custom heuristics, alpha-beta pruning, Q-learning, Value Iteration, and a from-scratch perceptron model for optimal decision-making in complex, randomized maps.

Tetris Game [↗]   Sep 2023 - Oct 2023
Developed a modern Tetris game using TypeScript and RxJS with reactive architecture, SVG rendering, and immutable state management. Features include real-time input handling, scoring, level scaling, hold queue, next piece preview, and custom wallkick logic, all without a game engine.

AWARD

International Level
- Australian National Chemistry Quiz | Royal Australian Chemical Institute | 2018 - *High Distinction Award*
- Euclid Contest | University of Waterloo | 2018 - *Distinction Award*
- Australian Mathematics Competition | Australian Mathematics Trust | 2018 - *Distinction Award*
- Australian Mathematics Competition | Australian Mathematics Trust | 2016 - *Distinction Award*
- Australian Mathematics Competition | Australian Mathematics Trust | 2014 - *Distinction Award*
- Kangaroo Maths Competition | Association Kangourou sans Frontières | 2016 - *Gold Medal*
- Kangaroo Maths Competition | Association Kangourou sans Frontières | 2014 - *Silver Medal*
- UNSW Global Mathematics | University of New South Wales | 2016 - *Distinction Award*
- UNSW Global Mathematics | University of New South Wales | 2015 - *High Distinction Award*
- UNSW Global Mathematics | University of New South Wales | 2013 - *Distinction Award*
- Singapore and Asian Schools Math Olympiad | SASMO | 2016 - *Bronze Award*
- Singapore and Asian Schools Math Olympiad | SASMO | 2014 - *Silver Award*

National Level
- Monash Coding League | Monash University | 2024 - *Sixth Place*
- Hackfest Hackathon | Monash University | 2024 - *Participation Award*
- KitaHack | GDSC Malaysia | 2024 - *Participation Award*
- Malaysian National Chemistry Quiz | Ministry of Education Malaysia | 2017 - *Distinction Award*
- National Olympiad Mathematics Competition | Ministry of Education Malaysia | 2015 - *Honorary Commendation*
- National Chess Competition | UTeM | 2012 - *Award of Excellence*

State Level
- Chinese Poem Recitation | Ministry of Education Malaysia | 2017 - *First Runner Up*
- Chinese Poem Recitation | Ministry of Education Malaysia | 2016 - *Champion*
- Chinese Poem Recitation | Ministry of Education Malaysia | 2015 - *Champion*
- Chinese Poem Recitation | Ministry of Education Malaysia | 2014 - *Champion*
- Chinese Poem Recitation | Ministry of Education Malaysia | 2013 - *Champion*

School Level
- Monash High Achiever Award | Monash University | 2022-2025
- FIT2081 Mobile Application | Monash University | 2024 - *Commendation Award*
- Pac-Man Challenge | Monash University | 2024 - *1st Place*
- FIT1043 Data Science Kaggle Competition | Monash University | 2022 - *2nd Place*
- Design and Manufacture | Imperial College London | 2021 - *Excellence Award*
- Chinese Society | SMJK Yok Bin | 2017 - *President*
- Chess Club | SMJK Yok Bin | 2017 - *Vice President*

SKILLS

- **Frameworks**: React, Vue, Angular, Springboot, Flask, Next.js, Node.js, Express.js, MongoDB
- **Programming Languages**: Python, Java, JavaScript, TypeScript, SQL, HTML, CSS, R, Marie, Haskell
- **Development Principles**: OOP, DAO, UI/UX, Data Structures, Database Design, Sequence Diagram, Middlewares, Cybersecurity, Git, Docker
- **Artificial Intelligence**: OpenAI APIs, LangChain, RAG, FAISS Vector Database, Gaming, Search Algorithms
- **Data Science**: Data Analysis, Data Modeling, Statistical Modeling

LANGUAGE

- Fluent in English, Chinese and Malay.
- Basic in Cantonese.