Wang Jiefan

nafeij.me | wng.jiefan@gmail.com | linkedin.com/in/wang-jiefan | github.com/Nafeij

EDUCATION

National University of Singapore — Singapore
Bachelor of Computing, Focus in Software Engineering — *Aug. 2021 – July 2025 (Est.)*
- Current GPA: 4.26
- NUS GDG (Games Development Group) Member

NUS High School of Math. and Science — Singapore
Diploma w/ High Distinction — *Jan. 2013 – Oct. 2018*
- Honours in Physics and Computer Science, Majors in Chemistry and Mathematics
- Debate and Oratorical Society Executive Council Vice President
- Appventure (Computing Studies Interest Group) Contributor

EXPERIENCE

Software Engineer Intern — Singapore
Pinvest Pte. Ltd. — *May - July 2023*
- Proposed and integrated parallelization and optimization constructs, such as streaming, pipelining and caching, into LLM service infrastructure. Latency for API endpoints improved by as much as 35%.
- Triaged and fixed several request-spoofing security vulnerabilities to mobile financial trading platform.

Teaching Assistant (CS2109 Introduction to Machine Learning) — Singapore
National University of Singapore — *Aug. - Nov. 2023*
- Created challenges for assignments that involve knowledge of foundational machine-learning concepts.
- Administrated marking of submissions, conducted weekly tutorial sessions and provided consultation to students.
- Implemented automatic cloud-based solution for batched compilation of LaTeX homework papers.

PROJECTS

Order-Matching System | *C++* — Sep. 2023 – Nov. 2023
- Socket-based HFT-inspired multi-threading order-matching engine .
- Utilizes custom extension of `std::priority_queue` that is thread-safe, supports arbitrary removal and iteration.
- Intel Core i7-9700 (8 cores, 8 threads): Processes 2000 buy-sell orders in around 18ms.

Scrolly | *PyTorch, Typescript, OpenAI API* — Mar. 2023 – May. 2023
- AI-driven single-command karaoke video synthesizer.
- Uses OpenAI's Whisper API for transcription, Facebook's Demucs for vocal isolation, and Remotion + AWS Lambda for cloud-based video rendering.

PySlidingWindow | *Python* — Aug. 2022 – Nov. 2022
- Custom hybrid lossless file transfer over UDP. 15kbps (19% slowdown) at 40% packet corruption and 40% packet loss.

Knuckleclone | *React, Git, Peer.js, Node.js* — Aug. 2022 – Jan. 2023
- Web-based adaptation of dice minigame from Cult of the Lamb (2022).
- Responsive web application serving REST API to React frontend, using PeerJS to broker P2P connections for multiplayer. 1200 active unique users.
- Dockerized and hosted on Google Cloud Run.

Video Game Modding | *Unity, Blender, GIMP, ActionScript, JSON* — July 2018 – Present
- I reverse-engineer, modify and bug-fix old video games in my spare time. Conducted static analysis and decompilation of game engines.
- The Banner Saga (2018 – Present) - 11,000 unique users.
- Journey (2020 – Jan. 2023) - 12,000 unique users.

ACHIEVEMENTS

National Infocomm Competition - *Distinction*	2016
Canadian Computing Competition (Senior) - *Distinction*	2018
Singapore Pre-University Seminar - *Team Lead*	2017

TECHNICAL SKILLS

Languages: Java, Python, C\C++, Go, Rust, PostgresSQL, JavaScript, HTML/CSS, MIPS Architecture
Frameworks, Libraries & Tools: React, Node.js, JUnit, Git, OpenMP, OpenMPI, Docker, Google Cloud Platform, Github Actions, Android SDK, Xcode, Gradio, CUDA, Nestjs, Expo, Firebase, Testflight, Jest, GraphQL, MongoDB, pandas, NumPy, PyTorch, pwnTools, Matplotlib, Selenium WebDriver

MISCELLANEOUS

As a Singapore Citizen, I'm eligible for the **USSFTA H1B1 Visa**.