

# Wang Jiefan

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## EDUCATION

### National University of Singapore

*Bachelor of Computing, Focus in Software Engineering*

Singapore

Aug. 2021 – Present

- Current GPA: 4.26
- NUS GDG (Games Development Group) Member

### NUS High School of Math. and Science

*Diploma w/ High Distinction*

Singapore

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

*Pinvest Pte. Ltd.*

Singapore

May - July 2023

- Research cutting-edge AI developments. Integrate Llama 2 and Langchain, as well as optimizations such as streaming, pipelining and caching, into LLM service platform.
- Triage bugs, propose features and submit codebase pull requests to mobile financial trading platform, utilizing technologies like Nestjs, Expo, Firebase, Testflight, Jest, GraphQL, MongoDB.

### Teaching Assistant (CS2109 Introduction to Machine Learning)

*National University of Singapore*

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.

## PROJECTS

### Scrolly | *PyTorch, Typescript, OpenAI API*

Mar. 2023 – May. 2023

- AI-driven CLI karaoke video synthesizer.
- Uses OpenAI's Whisper API for transcription, Facebook's Demucs for vocal isolation, and Remotion + AWS Lambda for dynamic cloud-based video rendering.

### PySlidingWindow | *Python*

Aug. 2022 – Nov. 2022

- Hybrid lossless packet-based file transmission protocol. 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 with Github Pages serving REST API to React frontend, using PeerJS to broker P2P connections for multiplayer
- 1200 active unique users

### 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++, Go, Rust, SQL (Postgres, SQLite), JavaScript, HTML/CSS, MIPS

**Frameworks & Tools:** React, Node.js, JUnit, Git, Docker, Google Cloud Platform, Github Actions, Android SDK, Xcode, Gradle, CUDA

**Libraries:** pandas, NumPy, PyTorch, pwnTools, Matplotlib, Selenium WebDriver

## MISCELLANEOUS

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