

Peter Jung

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EDUCATION

National University of Singapore

Bachelor of Computing (Honours), Computer Science, GPA: 4.63/5.0

Singapore

Aug 2020 – July 2026

- **Relevant coursework:** Artificial Intelligence & Machine Learning, Operating Systems, Database Systems, Computer Networks, Algorithms & Data Structures, Software Engineering, Human-Computer Interaction

WORK EXPERIENCE

ByteDance (TikTok)

Software Engineer Intern

Singapore

May 2022 – Jul 2022, May 2023 – Jul 2023

- Launched referral system for BytePlus with **Salesforce** integration; onboarded **10** new mid- and large-scale enterprise customers.
- Spearheaded migration of **Node.js** backend infrastructure; improved code maintainability and increased test case coverage by **20%**.
- Developed **3** separate product pages (MusicLab, Effects, and MediaLive) with **Next.js**; boosted session traffic by **40%**.
- Implemented **React/FastAPI**-based full stack in-house CMS; increased publish throughput of marketing materials by **25%**.

National University of Singapore

Teaching Assistant

Singapore

Aug 2021 – May 2023

- Supported students across **4** courses (CS2102, CS2103T, CS2030S, CS1101S); mentored **54** students across all cohorts.
- Reinforced core concepts via structured guidance and feedback; achieved an **A-** average cohort grade.
- Delivered consistently high-quality teaching and timely support; maintained a **4.7/5** average student rating.

Source Academy (NUS)

Full Stack Developer

Singapore

Jan 2021 – May 2021

- Maintained **React/Node.js**-based platform used by **600+** first-year computer science students at the National University of Singapore.
- Expanded automated test coverage across core user flows; increased coverage by **15%** and reduced regression incidents in releases by **10%**.
- Collaborated with faculty and TAs to ship stable releases and document expression-reduction semantics for future maintainers.

Emart Mongolia

Full Stack Developer Intern

Ulaanbaatar, Mongolia

May 2018 – Jul 2018

- Designed **Figma** prototypes for Emart Mongolia's customer website; delivered **6** production-ready screens with clear interaction specs.
- Led weekly design alignment meetings to lock requirements and drive consistent UI/UX delivery; cut UI iteration cycles by **20%**.
- Translated finalised designs into **React/Rails**-based implementations as a full stack developer; shipped **2** user-facing workflows.

PUBLICATIONS

Investigating the Effects of Alternating Attention on People's Reliance on LLMs

Under review

Co-Author & Developer

Jan 2026

- Studying how divided attention affects reliance on LLM assistance; intersection of AI and cognitive science (human-centered computing).
- Designed a protocol combining an n-back distraction task with LSAT-style reasoning questions to measure reliance under cognitive load.
- Ongoing study; currently under review.

A Stepper for a Functional JavaScript Sub-language

SPLASH-E

Co-Author & Speaker

Oct 2021

- Showcased the first algebraic stepper for a JavaScript sub-language with return statements and block declarations.
- Presented live demonstration at the online SPLASH-E 2021 international symposium.
- **Publication:** <https://doi.org/10.1145/3484272.3484968>
- **Presentation:** <https://www.youtube.com/watch?v=vRjOP5fbZyE>

PROJECTS

Pulsepace – Immersive and Fast-paced Rhythm Game Experience

Tech Lead, Client Engineer

- A rhythm game for iPadOS developed in Swift; led a dynamic team of four in its iterative design and development.
- Implemented time-synchronised beat engine, beatmap designer, input pipeline, and achievements system.
- Directed UI/UX design efforts; leveraged industry-standard tools such as Balsamiq and Figma.
- **Technologies:** Swift, SwiftUI, Google Cloud Platform, Git, Balsamiq, Figma
- **GitHub repository:** <https://github.com/PulsePace/PulsePace>

Stepper – Stepwise Evaluator for a Functional JavaScript Sub-language

Full-Stack Developer

- A step-by-step debugger for a reduction-based JavaScript sub-language; spearheaded core maintenance.
- Fixed incorrect handling of anonymous functions by implementing lexical scoping and capture-avoiding substitution.
- Integrated unit tests and formalised documentation of expression reduction semantics.
- **Technologies:** TypeScript, React, Jest, Node.js
- **GitHub organisation:** <https://github.com/source-academy>

Minecraft Peggle – Touch-first Arcade Puzzle for iPad

Full-Stack Developer

- Designed and shipped an iPad arcade puzzle in SwiftUI with responsive gameplay and polished interactions.
- Built a custom 2D physics engine from scratch, implementing gravity, collision detection/response, and restitution for realistic dynamics.
- Architected with MVVM to separate rendering, state, and game logic for maintainability.
- **Technologies:** Swift, SwiftUI, Adobe Illustrator
- **GitHub repository:** <https://github.com/petermonky/minecraft-peggle>

OTHER EXPERIENCE

Republic of Korea Air Force

Seoul, South Korea

Staff Sergeant, Interpreter

Oct 2023 – Jul 2025

- Translated aerospace documentation (ICAO, FAA, NASA) between English and Korean, aligning with ROKAF operational requirements.
- Provided interpretation for ROK-US Ulchi Freedom Shield exercise at Camp Humphreys, supporting combined air operations.
- Facilitated joint command and control at MND Exercise Control Cell during ROK-US Freedom Shield through real-time interpretation.

SKILLS

Languages: Python, Java, TypeScript/JavaScript, Swift, C, C++, Go, Rust

Back-end/Systems: Linux, Docker, Kubernetes, SQL/PostgreSQL, Redis, Google Cloud Platform

Web/App: React, Svelte, Node.js, HTML/CSS

Fields of interest: Human-Computer Interaction, Spatial Computing, Artificial Intelligence & Machine Learning