

Sean Foo

Singapore

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SUMMARY

Software engineer with experience in a multitude of different companies and industries across big tech, fintech, cybersecurity, and private equity. Built LLM-powered APIs, distributed backend services in Go/Python, and full-stack products used by 4,000+ users. Strong in data structures & algorithms, concurrency (goroutines), Unix/Linux, networking, and cloud platforms (GCP/Firebase). Interested in large-scale backend and developer infrastructure. Singapore citizen.

EDUCATION

Nanyang Technological University

Bachelor of Computing in Computer Science

Singapore

Aug 2021 – Dec 2025 (expected)

- **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Distributed Systems, Computer Networks, Databases, Machine Learning.
- **Activities:** Student Entrepreneurship Program, Garage@EEE, NTU Open Source Society.

Ngee Ann Polytechnic

Diploma in Network Systems and Security; GPA: 3.67 / 4.0

Singapore

Apr 2016 – May 2019

- **Awards:** Westcon Group Prize for top performance in Cloud Architecture and Security.

EXPERIENCE

TikTok

Software Engineer

Singapore

Jan 2026 – Present

- **Privacy & Security:** Data Protection Engineering

PXT Equity

Developer Intern

Singapore

Jul 2025 – Jan 2026

- **LLM-based resume scoring:** Developed a Google Genkit-powered resume-scoring microservice that standardizes scorecards and auto-ranks applicants, reducing manual screening time by 30%.
- **UI features & fixes:** Designed and built various features and fixes for an inventory management system.

Uniad

Co-founder & Software Engineer

Singapore

Dec 2022 – Mar 2025

- **Product & scale:** Co-founded and launched Uniad, a free super-app matching students with PSLE/O-Level/A-Level tutors and tuition centres; scaled to 4,000+ users across 4 countries.
- **Full-stack development:** Built cross-platform mobile and web apps with Flutter, Next.js, and Firebase, implementing tutor listings, messaging, analytics, and video course management.
- **Backend infrastructure:** Designed shared backend services using serverless Cloud Functions for Firebase, focusing on reliability, security, and low-latency data access.

Tencent

Algorithm Software Engineer Intern

Singapore

Aug 2024 – Dec 2024

- **LLM translation API:** Contributed to an LLM-powered text translation API in Go, optimizing inference workflows and prompt design to improve contextual accuracy at scale.
- **Text categorization microservice:** Implemented regex-based features and data-processing pipelines that improved topic classification robustness for diverse inputs.
- **Performance & concurrency:** Engineered backend concurrency mechanisms using goroutines and efficient data structures, reducing endpoint latency by 22% and increasing throughput.

Oversea-Chinese Banking Corporation

Software Engineer Intern

Singapore

May 2024 – Aug 2024

- **Quantum circuit sandbox:** Built an interactive quantum circuit sandbox using React, Flask, and Qiskit with a Python code editor and drag-and-drop gates for internal experimentation.
- **Virtual banking avatar:** Implemented a proof-of-concept virtual banking avatar using Next.js and Microsoft Azure APIs, exploring multimodal digital customer support.

SquareX

Software Engineer Intern

Singapore

Jan 2024 – Apr 2024

- **Security research:** Researched advanced malware obfuscation techniques and built a demo web app showing how attackers can bypass industry-standard web security gateways.
- **System-level security:** Implemented privileged backend components in Rust using native Windows APIs to enhance system-level network security for consumer clients.
- **Serverless workloads:** Developed and deployed serverless functions on GCP using dynamic programming to match program identifiers for daily production traffic.

Razer

Software Engineer Intern

Singapore

Jul 2023 – Dec 2023

- **Data residency proxy:** Led development of a data-residency proxy in Go (Gin) using clean architecture principles to route requests across regions for compliance.
- **Recommendations & testing:** Contributed to an API endpoint feeding AI-powered product recommendations; automated API tests with Python and pytest, reducing time-to-deployment by 13%.

Accenture

Deployment Analyst Intern

Singapore

May 2023 – Jul 2023

- **Release coordination:** Liaised with cross-functional teams to plan, schedule, and validate application deployments for enterprise clients.

Seagate Technology

Software Engineer Intern

Singapore

May 2022 – Jul 2022

- **Test automation:** Developed a Python desktop tool (Tkinter) to automate execution of test cases for 200+ engineers, improving productivity and consistency.
- **Requirements matching:** Built a Python tool that uses abstract syntax tree analysis to categorize test scripts, achieving 100% accuracy in requirements matching.

TECHNICAL SKILLS

Languages: Python, Go, JavaScript/TypeScript, Dart, SQL, HTML/CSS, \LaTeX

Systems: Data Structures & Algorithms, Concurrency (goroutines), Unix/Linux, Networking, Security, Distributed Systems

Frameworks: React, Next.js, Node.js, Flutter, Firebase

Cloud & Tools: GCP (Cloud Functions, Agents SDK, Genkit), Firebase, AWS, Docker, Git/GitHub, VS Code, Postman

Other: Object-Oriented Design, RESTful API Development, Test Automation (pytest), Open-source development

PROJECTS

quantif-ai (Next.js, TypeScript, Firebase, Gemini): Full-stack wealth-management platform integrating quantitative models (VaR, Sharpe ratio, beta, Monte Carlo simulations) with an LLM-powered agentic workflow that pulls real-time market data, uses retrieval-augmented generation, and enforces structured JSON outputs.

Firestore Authentication Backup Extension (Node.js, TypeScript, GCP): Open-source Firestore Extension that automates scheduled backups of Firestore Authentication users to Cloud Storage; uses GitHub Actions for CI/CD across testing, build, and deployment.

Digital Photobooth (Next.js, Tailwind CSS, Next.js, Zustand, HTML): Architected a responsive, browser-based Photobooth application using Next.js 16 and Tailwind CSS, featuring real-time camera processing, custom HTML5 Canvas rendering for photo strips, and complex state management with Zustand.

Centaurion Logistics API (Python, Quart, Next.js, GCP; production service now sunset): Designed and built both the developer portal and asynchronous REST API for a logistics company, including secure API key management and automated API scraping.

Ricart–Agrawala Algorithm Simulator (Next.js, Tailwind): Visual simulator of the Ricart–Agrawala distributed mutual exclusion algorithm, allowing users to configure nodes and observe message-passing and critical-section access.

FindParkingSG Telegram Bot (Python): Telegram bot serving nearby carpark locations and pricing rules in Singapore, used by 500+ registered users.