

Arnav Aggarwal

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WORK AUTHORIZATION

Singapore Citizen; eligible for H-1B1 and J-1 US visas

EDUCATION

National University of Singapore (NUS)

Expected: May 2025

Bachelor of Computing (Honours) in Computer Science

GPA: 4.72/5.00

- Teaching Assistant for CS2107 (Information Security) and CS2109S (AI and Machine Learning)
- Research Assistant, Singapore Blockchain Innovation Programme, NUS
- Dean's List: Academic Year 2023/2024, Semester 2

EXPERIENCE

Hudson River Trading

May 2024 – Aug 2024

Software Engineering Intern

Singapore

- Designed and implemented a novel state machine framework for distributed cryptocurrency processing, improving system reliability and scalability
- Optimized trade extraction tool through Python profiling and C++ refactoring, reducing runtime by 75%
- Enhanced position consolidation tool for flexibility, enhancing post-trade analysis with custom data grouping

Tocco

Feb 2023 – Aug 2023

Founding Software Engineer Intern

Paris, France

- As first engineering hire, architected and built entire product from scratch, including backend, frontend, and data pipeline
- Developed efficient data collection system for 25,000+ sustainable products using OpenAI API
- Designed and implemented scalable database system to handle rapidly growing data volumes
- Contributed to frontend development with ReactJS and Tailwind CSS, improving user engagement by 25%

Cyball

Aug 2022 – Dec 2022

Back End Engineer

Singapore

- Engineered websocket and REST endpoints using GoLang and AWS Lambda, enhancing real-time capabilities
- Expanded unit test coverage from 40% to 90%, reducing production bugs by 60%
- Implemented efficient data caching strategies, reducing server load by 30% and improving response times

TikTok

May 2022 – Sep 2022

Back End Engineer Intern

Singapore

- Developed Golang microservices for TikTok Shop's Data Compass, providing actionable insights to 200,000+ sellers and improving their product promotion strategies
- Led backend R&D for new features, increasing user adoption by 30% and enhancing overall platform engagement
- Optimized REST endpoints via gRPC, reducing data retrieval latency by 50% and significantly improving application responsiveness

Psyk.care

May 2022 – Sep 2022

Lead Software Developer

Singapore

- Co-founded mental health platform, leading a team of 4 developers to successfully launch MVP within 3 months
- Implemented Solidity smart contracts and REST endpoints for secure user authentication, ensuring data privacy
- Established GitHub best practices and accelerated development cycles, resulting in faster feature delivery

MicroSec

Jan 2021 – Jun 2021

Full-Stack Developer / Cybersecurity Intern

Singapore

- Enhanced IoT device tracking application, increasing user satisfaction by 40% through improved UI/UX and real-time data visualization
- Optimized backend communication, reducing data retrieval times from 10s to 3s, leading to more responsive and efficient system operations
- Implemented advanced security scanning features, improving threat detection by 25% and enhancing overall system security for client networks

SKILLS

- **Languages:** Python, Go, Java, Solidity, C/C++, TypeScript, HTML, CSS, SQL
- **Technologies:** Git, Linux, Docker, AWS, Google Cloud, Redis, MongoDB, PostgreSQL, WebSockets, REST APIs, gRPC
- **Frameworks:** ReactJS, NextJS, Tailwind CSS, Reinforcement Learning, Neural Networks