

Benn Tan

+65-9171-4744 | benn.tan@u.nus.edu | benntan.com | linkedin.com/in/benntan | github.com/btjm123

EDUCATION

National University of Singapore

BComp. Computer Science (Hons)

First Class Honours (On-Track)

Expected Graduation: May 2027

- Certificate of Distinction in Networking & Distributed Systems Focus Area
- Top Students Award - Introduction to Operating Systems (*A+* out of 592 students)
- Teaching Assistant - CS2040S: Data Structures & Algorithms (*Feedback Score: 4.8/5.0, Faculty Average: 4.2/5.0*)

EXPERIENCE

Palantir Technologies

Incoming Software Engineer Intern

Aug 2026 - Dec 2026

New York City, United States (On-Site)

- Contributing as part of Ontology Infrastructure Team

Citadel Securities

Incoming Software Engineer Intern

May 2026 - July 2026

Hong Kong, Hong Kong SAR (On-Site)

- Contributing as part of C++ Real-Time Trading Team

Squarepoint Capital (C++ Data Infrastructure Team)

Software Engineer Intern

Jan 2026 - May 2026

Singapore

- Working on an internal **spcurl** command in **C++** to send **kdb+** payloads with human-readable **JSON** interface
- Invented type inference heuristics to map loosely-typed **JSON** values to **kdb+/q** types via **recursive descent parsing**, accurately handling primitives (i.e **date**, **timestamp**) and structures (i.e **dictionary**, **nested lists**)

The Trade Desk (User Trails Team)

Software Engineer Intern

May 2025 - Aug 2025

Singapore

- Designed Product Insights Tool in **C#**, **Python**, **Spark** integrating $\approx 2\text{TB}$ worth of real-time analytical data from Databricks Delta Lake (**Parquet**), utilizing SQL warehouse query optimizations and thread-level concurrency
- Ensured reliability and performance of backend APIs by implementing exponential backoffs across all unsuccessful network requests and batching large response payloads, reducing failure rates by $\approx 30\%$
- Shipped an interactive Sankey Chart in **React**, **TypeScript** by modeling user journeys across the Kokai platform as **directed-acyclic-graphs**, cutting time-to-insight across different product and analytical teams by > 1 day

Apple (Apple Online Store Team)

Software Engineer Intern

Jan 2025 - May 2025

Singapore

- Engineered a backend service in **Java**, **Spring Boot** that streams order alerts in real-time from Apple's internal Monitoring Data Platform to Slack, enabling Customer Support to rapidly identify critical network issues
- Reduced **AWS TimestreamDB** response time from **5s** to **0.5s** for querying millions of Nginx Ingress Controller records and Kubernetes pod metrics using asynchronous I/O and event-driven caching with **Redis**
- Implemented **adaptive thresholding** in Splunk Processing Language to automate detection of anomalous logs amongst billions of Splunk events, achieving a **recall rate of $> 70\%$** and allowing for predictive intervention

PROJECTS

Lightweight Hashmap | *C++17, CMake, Google Test*

June 2024

- Implemented **linear probing** and **chaining (with linked lists)** with **C++17** to create two hashmap variants

IPPT Machine | *Python, OpenCV, Streamlit, Math*

Aug 2022

- Uses **OpenCV** and **MediaPipe** to parse video input and conduct pose estimation
- Wrote custom trigonometric functions in **Python** to calculate critical angles between bone joints
- Won **Special Prize - Most Data Friendly Hack** in NUS LifeHacks 2022 as a pre-university student

AWARDS

National Olympiad in Informatics 2020: Silver Medal and shortlisted for **SG National Team training**

Victorian Pioneer Award 2020: Emerged as one of 6 recipients out of a cohort of 800 in **Victoria Junior College**

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), TypeScript, Swift, HTML/CSS

Technologies/Frameworks: React, Node.js, Flask, JUnit, Docker, AWS, Linux