

Alistair Ong

Website | Github | LinkedIn | ongalistair@gmail.com

EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE

BComp in Computer Science
(Honours)

University Scholars
Programme

Grad. Dec 2020 | Singapore

SKILLS

LANGUAGES

Experienced:

Go • Typescript • Python

Java • SQL

Familiar:

C++ • C

FRAMEWORKS AND TOOLS

Elasticsearch • Scylla • Redis

gRPC • MySQL • Kafka

Prometheus • Grafana •

Docker • Kubernetes • React

COURSEWORK

UNDERGRADUATE

Computer Networks

Operating Systems

Software Engineering

Artificial Intelligence

Algorithms and Complexity

AWARDS

2018	USP Honour Roll
2012	Standard Chartered Most Creative Apprentice
2010	Edusave Scholarships for Integrated Programme Schools (ESIP)

LEADERSHIP

2019	Peer Mentor NUS USP Computing
2017	Vice Project Director SoC Sports Camp 2018
2017	Vice Captain NUS USP Badminton
2017	Orientation Group Leader University Scholars Club

EXPERIENCE

GARENA | SOFTWARE ENGINEER, BACKEND

Dec 2020 – Present | Singapore, SG

- Conceptualized, designed and implemented a brand new messaging service for the Booyah! livestreaming app. Able to take around max 16k QPS per chat group (hot partition), **100k QPS** globally across all chat groups and **1M concurrent users** in a chat group. Made with **Go**, **Redis** and **ScyllaDB**.
- Optimized and tuned use of Redis Client Libraries and Redis Cluster to provide a **20% speedup** in cache requests, and better telemetry and observability for all engineers.
- Implemented all features related to **Elasticsearch** for performant search, filter, sort, pagination use in our new club service for Booyah!. Optimized to be able to handle **40k QPS** across all features using Elasticsearch.
- Developed dashboard, metrics, logs and tracing (telemetry) for our messaging service in Booyah! using **Prometheus**, **Grafana**, **Elasticsearch** and **Jaeger**.
- Developed SeaTalk Meets Beta, an internal video conferencing tool based on WebRTC. Developed the frontend and desktop client for the video conferencing using **React** and **Typescript**. Product was in internal trial phase before my rotation to Booyah! Server Team.

SHOPEE | SOFTWARE ENGINEERING INTERN

May 2020 – Jul 2020 | Singapore, SG

- Generalized filtering mechanism to enable greater filter combinations and more complex filtering logic. Done in **Go**.
- Extracted item-item degree associations based on user clicks using Hadoop MapReduce.

NINJA VAN | SOFTWARE ENGINEERING INTERN

Jan 2020 – Apr 2020 | Singapore, SG

- Enabled greater reliability in notification system by implementing dead letter queues with **Kafka** streams. Done in **Java**.
- Optimizing **MySQL** migrations with GitHub's gh-ost for faster performance.

SEA GROUP | SOFTWARE ENGINEERING INTERN

May 2019 – Aug 2019 | Singapore, SG

- Improved SeaTalk speed by 27x for web and desktop app by preventing excessive re-rendering.
- Created a React-Redux web app for prototyping an events management platform. Done in **Typescript**.

NATIONAL UNIVERSITY OF SINGAPORE | TEACHING ASSISTANT, COMPUTER ARCHITECTURE

Aug 2018 – Dec 2018 | Singapore, SG

Teaching assistant for around 100 students dealing with:

- Combinatorial and sequential circuit design techniques
- Processor datapath and control (execution cycles)
- CPU Pipelining and memory caching