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

ANGLO-CHINESE SCHOOL (INDEPENDENT)
International Baccalaureate
Grad. Dec 2013 | Singapore

AWARDS

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

SKILLS

LANGUAGES
Over 5000 Lines:
Go • Typescript
Over 1000 Lines:
Python

FRAMEWORKS AND TOOLS
Elasticsearch • Scylla • Redis
gRPC • MySQL • Kafka
Docker • Kubernetes

COURSEWORK

UNDERGRADUATE
Computer Networks
Operating Systems
Software Engineering
Artificial Intelligence
Algorithms and Complexity

SOCIETIES

NUS Students' Computing Club
NUS University Scholars Club
NUS USP Livecore

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.
  Optimized to be able to handle **40k QPS** across all features using Elasticsearch.

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 Golang.
- 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.
- 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.

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

LEADERSHIP

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