Anh Tai Tran

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Education

Nanyang Technological University **Aug 2018 - May 2022**

◦ Bachelor of Engineering (Computer Science) with a Specialization in High Performance Computing with Distinction.
◦ Relevant courseworks*:* **Advanced Algorithm**, **Software Engineering**, **Computer Architecture, Advanced Database System**

Experience

ByteDance Singapore: Backend Engineer **July 2022 – May 2024**

◦ Working on Bytehouse, a high performance, cloud native, big data analytics platform (OLAP).
◦ Working on several microservices with various responsibilities such as metadata management, a Gateway, query parsing, query history management, scheduled task executions and more.
◦ **Service owner** of a microservice used to manage our custom kubernetes resource, the virtual warehouse, where customer query computation takes place.
◦ Introduced openTelemetry to **help trace query execution** across microservices.
◦ Help customers with production problems during monthly **on-call rotations** in a responsive and timely manner.
◦ Delivered multiple fixes and new features in various **Bytehouse open source** repositories to support customers. Keep the open source codebase up-to-date with internal codebases. Source: https://github.com/bytehouse-cloud
◦ Tech stack: **Golang, Java, Kubernetes, Kibana, Grafana, Redis, Karate, MySQL, Clickhouse, OpenTelemetry**

ByteDance Singapore: Software Engineering Intern **May 2021 – Aug 2021**

◦ Part of the **Cloud Native Clickhouse** team which works on creating a cloud native version of Clickhouse.
◦ Conduct **benchmark testing** for service discovery lookup to rectify the bottleneck to provide an insight to other devs.
◦ **Improve the performance** of the server by restarting the server only if changes have been made to the config.
◦ Tech stack: **C++, perf, CoreDNS, ClickHouse**.

Paypal Singapore: Software Engineering Intern **Aug 2020 – Dec 2020**

◦ Part of the **Consumer Financial Service** team. Worked on **Push Notification functionality** to ensure a specific group of customers receive notifications.
◦ Tech stack: **Java, Spring Framework, Android SDK, NodeJS**

Projects & Publications

Final Year Project: Path Finding Visualizer **Aug 2021 - June 2022**

◦ Multi-agent path finding is a path planning problem for multiple agents to go to their destinations with minimum cost as well as no collisions should occur. The goal of this project was to visualize the paths for all agents when different algorithms are applied.
◦ Served as the **team leader**, in charge of task allocation and project coordination.
◦ **Implemented all researched multi-agent path finding algorithms**.
◦ Propose an **enhancement** on one algorithm to divide the agents into groups for better avoiding collisions which proves to work better than the original algorithm in most of the benchmark graphs.
◦ Techstack: **Javascript**, **ReactJS**.
◦ Source: https://github.com/saobangmath/MAPFVisualizer

Modeling What-to-Ask and How-to-ask for Answer-unaware Conversational Question Generation
Xuan Long Do, Bowei Zou, Shafiq Joty, **Tran Tai**, Liangming Pan, Nancy Chen, Ai Ti Aw.

◦ The paper is about creating a model to ask relevant questions in a conversation based on the previous questions and answers.

◦ Implement an algorithm using Disjoint Set data structure for **building semantic graph to connect between the entities in the conversation histories** as a foundation for generating relevant questions .

◦ Source: https://aclanthology.org/2023.acl-long.603

Skills

- **Programming Language:** Golang, C++, Java, Python, Javascript
- **Tools and Framework:** NodeJS, ReactJS, Android SDK, Git
- **Softwares:** Jetbrains IDEA, Visual Studio Code, Codeblock, MS SQL Server

Honors and Awards

Top 10% on Codeforces – A competitive programming platform with over **60,000 active users.**

◦ Achieved **maximum rating** on **expert** standard (1600 - 1900)
◦ My handle: https://codeforces.com/profile/andy_tran

ACM-ICPC Jakarta Regional Competition:

◦ Competitive Programming competition where a team of 3 is given 5 hours to solve 12-13 algorithmic puzzles.
◦ **Nov 2021:**Rank **23 out of 61 teams** in the ACM-ICPC regional competition as a member of team WCRush
◦ **Dec 2020:** Rank **26 out of 62 teams** in the ACM-ICPC regional competition as a member of team NTUDragons.