

Yee Jian TAN

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Experience

Intern, Machine Learning Engineer

May 20 to Sep 20

Gojek Singapore

- Jointly designed and packaged a BigQuery to Kafka **data ingestion tool** that increased ingestion rate from ~10k to > 3000k rows/second using Google Cloud Dataflow.
- Maintained and polished the Gojek's **source-of-truth repository** for ML features using Feast. Created many CI validation and automation scripts, such as a one-click creation of recurring data ingestion pipelines and automatic feature deprecation guards.
- Designed and extended Feast's internal **gRPC backend to a REST service** for feature discovery and easy data monitoring.

Bash, Python, Docker, Java, Gitlab, Google Cloud (Dataflow, BigQuery)

Software Engineering Intern

May 19 to Aug 19

Computing for Voluntary Welfare Organisations (CVWO), NUS

- Streamlined and digitized volunteering workflow for more than 100 students every year by developing and maintaining a **Volunteer Management System** for the GIC Sparks program.
- For more than 6000 clients and 100 staff, reduced operating costs and increased the accuracy of data capture by maintaining a **Case Management System** for the Counselling and Co-parenting Centers by CareCorner.

Postgresql, Ruby on Rails, React, Redux, Typescript.

Publications:

A Stepper for a Functional JavaScript Sublanguage ([doi:10.1145/3484272.3484968](https://doi.org/10.1145/3484272.3484968))

Martin Henz, Thomas Tan, Zachary Chua, Peter Jung, Yee-Jian Tan, Xinyi Zhang, Jingjing Zhao
In *ACM SIGPLAN conference on Systems, Programming, Languages, and Applications: Software for Humanity (SPLASH-E) 2021*

Programming Languages/ Frameworks: Python, Shell, Linux. Experience in Prolog, Coq, Java, C++.

Awards/Scholarships:

- Oregon Programming Language Summer School (OPLSS) 2021 - Participant
 - Summer@EPFL 2021 - Top 15% applicant
 - NUS Computing - Honor List of Student Tutors 2019/2020 (teaching CS1101S, CS1010E)
 - Dr Goh Keng Swee full scholarship for all 5 years of undergraduate studies
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Education

National University of Singapore

Aug 18 to May 23

- Bachelor of Computing (Hons): Major in Computer Science (CAP: 4.50) & Bachelor of Science (Hons): Major in Mathematics (CAP: 4.50) (**Double Degree**)
 - Focus Area: (CS) Algorithms and Theory, Programming languages, (Math) Logic and Foundation, Abstract Algebra. Courses taken: Advanced OS, Compilers, Distributed and Parallel Algorithms.
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Projects

JLite Compiler - A Compiler Written in Python for a subset of Java

Aug 21 to Nov 21

Designed and implemented a compiler targeting ARMv7 for a functional subset of Java, as part of the course CS4212. Developed in Python 3.8 (required by the instructor) on Linux.

SPA-SER - Static Program Analyzer



Aug 20 to Nov 20

Designed and implemented an Optimizer component in C++ for a static program analyzer on a toy language SIMPLE. The optimizer sees average 30% speedups in query evaluation with original algorithms designed for pre-optimizing the SQL-like queries.

Source Stepper (Substituter) - A Lambda-Calculus-based interpreter



Jun 19 to Jan 20

Designed the first interpreter/debugger of its kind in the history of CS1101S, enabling step-by-step evaluation of Source (a functional sublanguage of Javascript) programs for all freshmen (> 600 annually), using purely lambda-calculus based substitution rules. Written in Typescript.