

TAN Yee Jian

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Education

National University of Singapore

Aug 18 to present

- Bachelor of Computing (Hons): Major in [Computer Science](#) (CAP: 4.50) & Bachelor of Science (Hons): Major in [Applied Mathematics](#) (CAP: 4.51) (Double Degree)
- Expected Date of Graduation: May 2023
- Focus Area: Algorithms and Theory, Programming languages
- Modules Taken/Taking: Type Theory, Design and Analysis of Algorithms, Logic for Proofs and Programs, Compiler Design
- Teaching Assistant:
 - CS1101S: Programming methodology (based on SICP)
 - CS1010E: Programming methodology (in Python, for Engineering students)

Oregon Programming Languages Summer School (OPLSS)

Jul 21

Attended the OPLSS 2021 virtually.

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*

Scholarship and Grants

Dr Goh Keng Swee Scholarship

Aug 18 to present

Prestigious full scholarship awarded to 3-4 selected students annually from 15 Asia Pacific economies, by the Association of Banks in Singapore (ABS).

MOE ASEAN Scholarship

Nov 13 to Dec 17

Offered by the Ministry of Education (MOE) in Singapore to rigorously selected students from ASEAN countries to study in Singapore until high school graduation, with expenses fully covered for 4 years.

Awards

NUS University Scholars Programme - Honour Roll (2020/21)

NUS School of Computing - Honour List of Student Tutors (2019/20)

Malaysian Computing Olympiad 2017 - Personal 13th

Malaysian Computing Competition 2017 - Top & Perfect Scorer, Senior Category

Projects

[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.

[SPA-SER](#) - Static Program Analyzer



Aug 20 to Nov 20

Designed and implemented an Optimizer component 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.

Work 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.

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 and Smiles 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.