

GOKUL RAJIV

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SUMMARY

I'm a recently graduated Computer Science and Mathematics undergraduate, excited to experience work in research. In particular, I am interested in the wide area of programming language theory (specifically formal verification, logic and type theory) and design.

PUBLICATIONS

Sound and Efficient Generation of Data-Oriented Exploits via Programming Language Synthesis

Yuxi Ling, Gokul Rajiv, Kiran Gopinathan, and Ilya Sergey

USENIX Security Symposium 2025

Celestial Machine Learning - Discovering the Planarity, Heliocentricity, and Orbital Equation of Mars with AI Feynman

Zi-Yu Khoo, Gokul Rajiv, Abel Yang, Jonathan Sze Choong Low, Stéphane Bressan

iiWAS 2023

WORK EXPERIENCE

Hong Kong University of Science and Technology

May 2025 to August 2025

Undergraduate Intern

- Student researcher at TACO lab, advised by Lionel Parreaux, working on features for the `mlscript` language, like traits and representation of sequences for spreads.

National University of Singapore

March 2024 to Present

Student Researcher

- Student researcher at VERSE Lab, advised by Ilya Sergey, working on programming languages and formal verification, with applications in security, software repair, and program / proof synthesis.
- Awards:** Received the Outstanding Undergraduate Researcher (Individual) Prize for this work.

Vilota AI

May 2023 to December 2024

Software Engineer

- Work on building capability for Visual Positioning Systems (perception systems designed in-house) which provide odometry information for applications in GPS starved settings.

National University of Singapore

Aug 2021 to May 2024

Teaching Assistant

- Taught Programming Methodology (CS1101S), Programming Methodology II (CS2030S), Software Engineering (CS2103T) and Operating Systems (CS2106). Placed on the Honor List of Student Tutors for Academic Year 2021/2022 & 2023/2024.

EXTRA-CURRICULAR WORK

Software Engineer, Bumblebee Autonomous Systems

2020 to 2024

Robotics and autonomy

- Software member in a multi-disciplinary student led competition marine robotics team in NUS.
- Awards:** 1st place RoboSub 2022; 2nd place RobotX 2022; 2nd perception challenge, 7th overall at Virtual RobotX 2022

Open Source Software Contributor, NUS

2021 to 2024

Web development

- Software Engineer Lead, Source Academy:** Led the game component of Source Academy, a programming platform for freshmen.
- Senior Developer, RepoSense:** Maintained the RepoSense contribution visualization tool used for software engineering classes.
- Awards:** Received the Outstanding Undergraduate Researcher (Group) Prize in recognition of the Source Academy team's work.

EDUCATION

National University of Singapore

Aug 2020 to Jun 2025

- Bachelor of Computing in Computer Science (GPA: 4.83/5) - Dean's List AY20/21 Sem 1 & 2, AY24/25 Sem 2, Turing Program
- Bachelor of Science in Mathematics (GPA: 4.83/5)

University of Toronto

Jan 2023 to Apr 2023

- Winter exchange program (GPA: 4.0/4.0) - **Classes:** Nonlinear optimization, Introduction to Machine Learning, Programming Languages, Parallel Programming, Ordinary Differential Equations

OTHER ACTIVITY

Artifact Evaluation Committee, ICFP 2025

July 2025

Student Volunteer, PLDI 2025

June 2025

Participant, Oregon Programming Languages Summer School (OPLSS)

June 2024

Student Volunteer, PLDI 2024

June 2024