

Phanuphat Srisukhawasu

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EDUCATION

Bachelor of Computing, Computer Science, National University of Singapore

Expected Graduation: Dec 2026

- GPA: First Class Honours
- Notable Coursework: Object-Oriented and Functional Programming (Java), Operating Systems, Programming Languages

WORK EXPERIENCE

Software Engineer Intern

May 2025 – Aug 2025

Computing for Voluntary Welfare Organisations (CVWO)

Singapore

- **Collaborated with a 10-person team** to design web (React, Redux, Go, Ruby, Rails, PostgreSQL), PWA (Ionic), and mobile (React Native) applications for Active Ageing Centre operations as part of a **GIC-supported impact program**.
- **Migrated legacy Ruby on Rails financial reporting module to modern React, Ionic, and Go stack**, independently delivering **22,000+ insertions and 12,000+ deletions** while upgrading CI/CD pipelines to improve maintainability.
- **Rewrote account statement querying logic** using concurrent goroutines, **overcoming critical performance bottlenecks** for processes handling 4,000+ transactions across 800+ client accounts, scheduled monthly via **cron job**.
- **Engineered reusable digital consent management system** in Go and React Native, enabling hospitals to contact patients' next of kin with e-signatures, **eliminating manual processes for 2,000+ patients**.

Research Student

May 2022 – Mar 2024

Department of Physics, Faculty of Science, Ramkhamhaeng University

Bangkok, Thailand

- Examined deep learning solutions for astronomy and space physics problems under Dr. Suttiwat Madlee's guidance.
- Developed an automated cosmic ray detection system for small cloud chambers using **YOLO models in PyTorch**, reducing analysis time from **hours to minutes** while maintaining **80% accuracy** (doi.org/10.1088/1742-6596/2653/1/012007).
- Innovated a **novel X-class solar flare identification** method utilizing custom convolutional autoencoders, achieving **30% accuracy improvement** and resolving class imbalance issues (doi.org/10.22541/essoar.174431882.20472576/v1).

PROJECTS

Planetary Image Stacker (github.com/oadultradeepfield/planetary-image-stacker)

- Engineered a **fast, memory-efficient C++ planetary image stacking tool with OpenCV**, consolidating the core functionality of two popular software (**PIPP and AutoStakkert!**) into a single streamlined application.
- Optimized **image alignment and stacking algorithms via OpenMP parallelization**, delivering a 3.5x faster performance.

Boonchubike CMS (phanuphats.com/projects/boonchubike-cms | github.com/oadultradeepfield/thai-address-api)

- Built a **client management system web app** for a bicycle business in Thailand using **React, TanStack, and Firebase**.
- Implemented a **reusable PDF generation feature** integrating the **Go-based Thai Address API** to automate delivery labels, **eliminating 800+ pages** of manual Word documents and **improving reliability**.

OtterBot (github.com/oadultradeepfield/otter-bot)

- Built an easily forkable **Python Telegram bot** that fetches tasks via the **Google Sheets API** and **sends daily reminders**.
- Implemented **automated notifications using GitHub Actions**, achieving a fully **serverless solution** and zero hosting cost.

SKILLS

Programming Languages

Go, Java, Python, C++, C, SQL, JavaScript, TypeScript, Ruby, R, HTML, CSS

Frameworks, Libraries, & Tools

React, Next.js, Tailwind CSS, Rails, PostgreSQL, Docker, AWS, GCP, Git, PyTorch

ACHIEVEMENTS

- **International Astronomy Olympiad (IAO) 2021** – Silver Medal (Top 8%)
- **International Olympiad on Astronomy and Astrophysics (IOAA) 2022/23** – Bronze Medal