Phanuphat Srisukhawasu

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EDUCATION

Bachelor of Computing, Computer Science, National University of Singapore Expected Graduation: Jun 2027

- GPA: First Class Honours
- Notable Coursework: Design & Analysis of Algorithms, Operating Systems, Programming Languages, Software Engineering

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.

RedactKit - TikTok TechJam 2025 (https://devpost.com/software/redactkit)

- Built an **on-device machine learning model** for PII redaction within iOS devices, leveraging **Swift, PyTorch and CoreML.**
- Designed and **fine-tuned a NeuroBERT-Mini** pipeline, integrating the **OpenAI API** for PII placeholder generation and applying **backward fake-PII injection** to synthesize training data, achieving a **95% F1-score** on a custom test set.

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.**

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