

# Tarit Witworrarakul

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## EDUCATION

### University of British Columbia

Bachelor of Science in Computer Science with minor in Commerce

- Outstanding International Student Award

September 2023 – May 2028

Vancouver, BC

## WORK EXPERIENCE

### CPSC 310 Undergraduate Teaching Assistant

September 2025 – April 2026

University of British Columbia

- Worked as part of a teaching team supporting 749 students in the Introduction to Software Engineering course
- Guided students on async programming (Promises, async/await), Express.js REST API design, and test case development in TypeScript full-stack projects
- Facilitated labs, graded written assignments and addressed spec-related and technical questions on Piazza

### Software Engineer Co-op

May 2025 – August 2025

Agoda Services (subsidiary of Booking Holdings Inc.)

Bangkok, Thailand

- Improved Cashback processing logic in a C#/.NET API by creating SQL stored procedures to query payment data and integrating additional data from the booking team's GraphQL API, adding validation logic to automate cases that once needed manual review
- Resolved 3 production bugs by updating API query logic and adding retry logic with fallback flags to conform with booking team's API spec for older bookings, improving Cashback page user experience
- Restored and stabilized previously flaky Cashback integration tests by integrating MockAPI endpoints into the GitLab CI/CD pipeline
- Developed a load testing suite with k6, simulating up to 500 req/sec with randomized input data and storing metrics in TimescaleDB for visualization on Grafana dashboards to validate performance ahead of new feature rollouts

### Software Developer Intern

June 2024 – August 2024

Applicad Public Company Limited

Bangkok, Thailand

- Built a backend service in Python with FastAPI for real-time facial recognition, using ChromaDB for face vector comparison and PostgreSQL with SQLAlchemy ORM for user data, integrated with the existing internal database
- Developed a Next.js web app for customer identification with 95% accuracy via webcam with admin dashboard
- Implemented role-based access control using NextAuth with JWT sessions and custom email OTP verification
- Deployed the application and databases to an on-premises Ubuntu server using Docker and Docker Compose

## TECHNICAL EXTRACURRICULARS

### PhishPatrol - StormHacks 2025 | FastAPI, Twilio, ElevenLabs, Next.js, Snowflake, OpenAI

October 2025

- Built PhishPatrol, cybersecurity training platform that simulates social engineering attacks through voice calls and tracks employee security awareness through detailed assessments
- Developed a RESTful API using FastAPI and managed persistent WebSocket connections with Twilio voice services and ElevenLabs API, enabling real-time voice interaction for scam-call simulations
- Delivered a full-stack app with Next.js, Snowflake; providing performance metrics and actionable security insights

### UBC Uncrewed Aircraft Systems - Software Developer | Flask

September 2023 – July 2025

- Migrated 15+ endpoints in a Flask-based HTTP API connecting backend systems and ArduPilot, to a cross-platform architecture using PyMavlink, eliminating reliance on Windows-only MissionPlanner client scripts

### Home Lab / Infrastructure Projects | Docker, Docker Compose, HAProxy

August 2023 - Present

- Deployed Vaultwarden in Docker behind HAProxy with automated TLS certificate management via acme.sh
- Built segmented network architecture using OPNsense with VLANs isolating guest and internal networks
- Provided remote access to homelab services behind CGNAT via Tailscale, eliminating the need for a public IP
- Centralized server metrics and application logging using Grafana Alloy and OTLP into Grafana Loki

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, Dart, C, C++, C#, Java, GoLang, R, HTML, SQL

**Libraries & Frameworks:** FastAPI, Node.js, Express.js, React, Echo, JUnit, Mocha, Chai, Jest, Playwright

**Developer Tools:** Git, GitHub, GitHub Actions, GitLab, Linux, Docker, Docker Compose, Swagger, Postman, IntelliJ, Datagrip, Cloudflare, GCP, Microsoft Azure, ChromaDB, PostgreSQL, HAProxy, NGINX