

Chachris Martin Kurz

Software Engineering Intern · Available from Apr 2027
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EDUCATION

Mahidol University International College

Expected Dec 2027

Bachelor of Science, Computer Science

GPA 3.96 / 4.00, on track for First Class Honours

Competed in the ICPC Thailand 2026 regional contest, Central Region

EXPERIENCE

Teaching Assistant, Computer Science, MUIC

Apr 2023 – Present

- Automated grading with Python autograders that compile and test every Java submission in an isolated workspace, with per-test partial credit, timeouts, and CSV export
- Wrote a plain-Java harness that constructs each submission reflectively, so a missing or misnamed constructor costs a student 1 test instead of failing the whole assignment
- Taught 40 students per term across 3 core CS courses: introductory programming in Python, data structures in Java, and algorithms in Kotlin

PROJECTS

beaconscope · Rust

github.com/K-Planky/beaconscope

- Built an offline CLI that detects command-and-control beaconing in connection logs from timing alone, ranking channels by FFT autocorrelation cross-checked against jitter-robust interval statistics
- Designed the score to decompose into regularity, concordance, and strength so a verdict can be audited, and to report no period when autocorrelation disagrees with the median gap instead of guessing
- Covered it with 110 unit and integration tests, gated in CI by exit code

Corvo · Java, Spring Boot, React, TypeScript, PostgreSQL

corvo.kplanky.dev

- Built and deployed a real-time multiplayer Othello server with a server-authoritative rules engine on 64-bit bitboards, STOMP over WebSocket play, JWT auth, and Elo-rated results
- Resolved concurrent move submissions with an optimistic lock and a unique index on game and move number, so a race yields 1 accepted move, not a corrupt board
- Validated the backend with 199 tests, including Testcontainers against PostgreSQL and assertions that alpha-beta in the 3-tier AI ladder returns the same move as negamax while visiting strictly fewer nodes

ic-webserver · C, flex, bison, pthreads

github.com/K-Planky/ic-webserver

- Implemented a concurrent HTTP 1.1 server with CGI support, generating the request parser from a flex lexer and bison grammar rather than hand-rolled string handling, so parsing follows the specification
- Measured roughly 55k requests per second with keep-alive and 37k without, 0 failures, over loopback at concurrency 50: a short ApacheBench burst, not a sustained-load benchmark

kplanky.dev Platform · Docker, Caddy, PostgreSQL, GitHub Actions

kplanky.dev

- Built and now operate the VPS behind both sites: a shared Caddy edge with automatic TLS, per-app Compose stacks on an isolated network, internal-only PostgreSQL, and nightly backups on systemd timers
- Closed a firewall bypass by adding default-deny DOCKER-USER rules, after finding that Docker DNAT rules run ahead of ufw and left a published container port reachable from the internet while ufw reported active

SKILLS

Languages: Rust, Java, C, Python, Kotlin, TypeScript, SQL

Web: Spring Boot, React, PostgreSQL, WebSocket, STOMP, JWT

Systems: pthreads, flex, bison, CGI

Tooling: Docker, Caddy, GitHub Actions, Git, Testcontainers

Spoken: English (fluent), Thai (native)