

Kian Kasad

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EDUCATION

Purdue University

B.S. in Computer Science, Minor in Mathematics

- GPA: 4.00
- Awards: Undergraduate TA Award, Outstanding Service to the CS Dept., Dean's List (×4), Semester Honors (×4)

West Lafayette, IN

Aug. 2023 – May 2027

EXPERIENCE

Software Engineer Intern

Theom, Inc.

May 2025 – Aug. 2025

San Jose, CA

- Developed high-throughput API services handling 20k+ requests/second.
- Deployed backend services written in Go using Docker on AWS EKS, ECS, and Snowflake SPCS.
- Implemented workflows to handle customer data securely by following minimum trust principles.

Head TA, CS 240: Programming in C

Purdue University

Sep. 2024 – May 2025

West Lafayette, IN

- Led a team of 5 developers to write, QA, and test weekly programming assignments in C for 1000+ students.
- Managed secure deployment, collection, and grading of homework assignments with a Git-based system.
- Totaled 50k lines of code contributed.

UTA & Developer, CS 240: Programming in C

Purdue University

June 2024 – Dec. 2024

West Lafayette, IN

- Led weekly labs and office hours, providing hands-on support for students.
- Graded ~300 programs/week for code cleanliness and standard compliance.
- Collaborated with professors to design instructional materials for 300+ students.
- Developed internal tools in Python for high-parallelism randomized testing/fuzzing.

Undergraduate Researcher

Purdue University

Jan. 2025 – May 2025

West Lafayette, IN

- Explored methods to improve performance of lookups in AVL trees using low-level x86_64 SIMD optimizations.
- Developed randomized throughput benchmarks for statistical analysis of optimizations.

PROJECTS

Purdue Hackers Webring | *Rust, Go, GitHub Actions CI*

Dec. 2024 – Present

- Migrated a full-stack web application from Go to Rust for improved security, performance, and availability.
- Implemented integration with Discord API to provide real-time notifications to users.
- Wrote CI/CD workflows using GitHub Actions to automate testing and deployment of changes.
- Achieved 87% test coverage to guarantee correctness of program behavior.
- High throughput, able to serve 15k requests/second on a tiny 1-core t2.micro AWS EC2 instance.

Userspace Network Stack | *Linux kernel, Rust, IPv4, UDP, TCP, TUN/TAP*

May 2025 – Present

- Working on an in-userspace implementation of IPv4, UDP, and TCP for Linux.
- Using Linux TUN/TAP devices to bypass the kernel networking stack.

Open-Source Contributions | *GitHub, C, Rust, JavaScript, Go, & more*

2020 – Present

- Opened 73 pull requests (53 merged, 7 open) across 39 repositories, excluding my own projects.
- Contributed to projects with up to 34k users, including [Manim](#), [CasaOS](#), and [Anubis](#).

Server Administration | *Linux, Ansible, Docker, Tailscale, Traefik, NGINX*

2019 – Present

- Deployed and managed two Debian Linux servers, maintaining 99.99% uptime for 5+ years.
- Running 40+ services using Docker Compose to orchestrate containers.
- Extensive monitoring and alerting using Grafana/Prometheus/Loki to collect/analyze service metrics and logs.
- Secure networking using VPNs with custom routing and DNS.

TECHNICAL SKILLS

Languages: Rust, C, C++, Go, Python, JavaScript, TypeScript, Java, SQL (Snowflake, SQLite3), Bash

Technologies/Concepts: Linux, UNIX, Networking, HTTP, REST APIs, ProtoBuf, Distributed systems, Async

Tools: Git, Docker, Kubernetes, GitHub Actions, GitLab CI/CD, VS Code, PyCharm, IntelliJ, GoLand, (Neo)Vim, SSH