

KANAK CHAUDHARI

me@cosmicoppai.com | 8007611826 | <https://cosmicoppai.com> | <https://github.com/cosmicoppai>

PROFESSIONAL SUMMARY

Backend-focused Software Engineer with 3+ years of experience in cloud-native systems, infrastructure automation, and high-performance backend services. Proven track record in DevOps, full-stack development, and building scalable tools. Strong background in open-source contributions and system optimization.

TECHNICAL SKILLS

Programming Languages: Go, Python, Ruby, C, JavaScript, Bash

Frameworks: Ruby on Rails, Django, FastAPI, Flask, PyQt5

Databases: MySQL, PostgreSQL, Redis, RabbitMQ

Cloud Platforms: AWS, Digital Ocean

DevOps Tools: Docker, Kubernetes, Jenkins, Ansible, Nginx, Prometheus, Grafana, ELK

Other: gRPC, OAuth2, API Key Management, Distributed Systems, Networking, System Design

Languages Spoken: English, Japanese, Hindi

PROFESSIONAL EXPERIENCE

Full Stack Software and Infrastructure Developer — PriceLabs

09/2023 - Current

– InfraSec and DevOps:

- Architected and managed scraping infrastructure handling 13 million+ listings from short-term rental sites
- Architected and executed RabbitMQ migration from single-node to HA multi-node quorum cluster, driving code changes, documentation, and load testing to ensure fault tolerance and reliability.
- Developed cost-efficient backup solution using XtraBackup and Docker, reducing operational costs significantly
- Built and maintained PMM dashboards and Grafana alerts for critical infrastructure monitoring
- Created and managed Ansible playbooks to deploy scripts and services across multiple servers
- Managed and upgraded server infrastructure and MySQL database cluster ensuring optimal system performance
- Implemented ELK-based logging solution with robust monitoring and failover mechanisms
- Set up an APM server from scratch and optimized clients for reliable tracing in high-load environments.
- Architected comprehensive Infrastructure-as-Code solution using Ansible, deploying production-grade monitoring systems and microservices across distributed environments achieving 99.9% up-time
- Built Wireguard VPN solution for network security and isolation
- Created Jenkins deployment pipelines for staggered releases and rollback procedures
- Led containerization of legacy push pricing system, enabling cloud-native compatibility and orchestrated using Docker Swarm
- Planned and implemented Redis Sentinel architecture, migrating from single-node setup
- Migrated Layer-7 traffic to HTTP/2, significantly improving latency across infrastructure
- Performed database security and performance audits
- Introduced and built SCA pipeline for threat and vulnerability detection in dependencies
- Created custom Prometheus exporter and watchdog systems to improve observability and alerting
- Designed and implemented centralized audit and monitoring system for the production jump server, enabling full traceability of administrative access and privileged operations.
- Built automated offboarding workflow that programmatically revoked VPN, admin panel, and jump server access, ensuring secure access lifecycle management and eliminating stale credentials.

– Full Stack Development:

- Optimized system performance significantly by tuning Redis queries.

- Improved API response times by reducing database calls for authentication and migrating session management to Redis.
- Created inter-account note collaboration feature with pin and reminder capabilities
- Designed and open-sourced generic Redis-backed rate limiter with Fixed and Rolling Window algorithms
- Created command-driven system using Redis, Sidekiq, and Rails reducing system load by 5x
- Optimized scraping process by 6x through reduced database connections and implemented prepared statements with batch insertions
- Optimized database queries and resolved deadlocks improving application performance
- Created internal TLS spoofing proxy system processing millions of daily requests
- Improved performance of Sidekiq background jobs and reduced resource consumption through Ruby memory management optimization
- Optimized billing job processing by redesigning execution flow into smaller controlled batches, reducing peak memory consumption by 30% and improving processing stability under load.

DevOps and Security Developer — Data Cloud Gaze

10/2024 - 02/2025

- Created PostgreSQL containerization tool with plugin extensibility, significantly simplifying and accelerating database deployment
- Architected and implemented cross-platform CI/CD pipelines with multi-cloud storage integration
- Engineered robust DLL protection mechanisms to enhance application security against reverse engineering
- Designed and built license server for secure software distribution
- Created build pipelines and scripts using Bash and PowerShell

Software Engineer — RyoCurrency

10/2021 - 10/2022

– Security and Reverse Engineering:

- Engineered advanced Man-in-the-Middle (MITM) proxy system to analyze and decode mobile application traffic patterns
- Developed sophisticated automation bots leveraging decompiled application keys and heuristic methods
- Implemented binary encoding for telemetry data to optimize transmission security

– Software Engineering:

- Architected and deployed full-stack application from initial planning to production deployment
- Containerized entire application stack including Django backend, scrapers, and Nginx using Docker
- Built real-time visualization system for Apache logs using Sanic server with Nginx integration
- Optimized search infrastructure with Manticore search engine, achieving 200% performance improvement
- Designed scalable REST API handling millions of records with Django and PostgreSQL

PROJECTS AND CONTRIBUTIONS

Omamori — Enterprise VPN and Secure Access Platform (Production)

- Designed and built a production-grade enterprise VPN platform delivering secure, policy-controlled internet access to organizations, serving 500+ active users.
- Architected clear separation between control plane (authentication, policy management, billing, user provisioning) and data plane (WireGuard-based traffic enforcement).
- Developed backend services in Go with gRPC-based communication for high-performance and strongly-typed service orchestration.
- Implemented multi-tenant user and profile management with per-organization policy enforcement and distributed rate limiting.
- Built dynamic WireGuard configuration provisioning and automated key lifecycle management.
- Engineered profile-level DNS filtering with planned client-side IP blocking to reduce server-side load and improve enforcement efficiency.
- Designed and deployed AWS infrastructure using IAM, EC2, KMS, S3, Security Groups, and private

- VPC routing for secure intranet isolation.
- Integrated Chargebee for subscription-based billing, implementing idempotent webhook processors for activation, upgrade, downgrade, and cancellation flows.
- Designed internal billing state synchronization layer to ensure consistency between external subscription events and feature gating in the control plane.
- Implemented telemetry and observability pipelines for traffic analytics and system health monitoring.

ACHIEVEMENTS

- Winner of the All-India Hackathon in Mumbai among 336 participants (2023)
- Semi-Finalist at the All-India Hackathon at Charotar University
- Speaker at MumPy 2024: "Secure Distribution Strategy for Commercial Applications"

EDUCATION

Bachelor of Technology in Information Technology
Savitribai Phule University (Pune University)

GPA: 9.0/10.0