CONTACT

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🔗 https://github.com/cosmicoppai

🌐 https://cosmicoppai.com

CORE COMPETENCIES

- Cloud-Native Architecture
- Infrastructure Automation
- Performance Optimization Strategies
- Security Protocols
- Open-Source Contributions
- Scalable Application Design
- Continuous Integration and Deployment
- System Reliability Engineering

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:** Amazon Web Services, Digital Ocean
- **DevOps Tools:** Docker, Kubernetes, Jenkins, Ansible, Nginx, Prometheus, Grafana, ELK
- **Networking & Security:** WireGuard, VPNs, DNS, TLS, eBPF, Traffic Inspection

EDUCATION

2023
B.Tech. in IT from Savitribai Phule University (Pune University) | **GPA:** 9.0/10.0

SOFT SKILLS

- Systemic thinking
- Problem-solving
- Technical leadership
- Analytical thinking
- Communication

KANAK CHAUDHARI

Result-driven Software Engineer with 3+ years of experience in software engineering, specializing in back-end systems, infrastructure automation and cloud-native architectures across diverse technology domains, targeting advanced roles to deliver innovative solutions.

PROFILE SUMMARY

- Developed a robust skill set across **back-end, infrastructure, and security engineering**, specializing in **scalable system design**, **high-performance architectures**, and **operational optimization.**
- Architected and delivered **high-availability, fault-tolerant systems**, driving measurable improvements in throughput, reliability, and efficiency across **distributed environments.**
- Implemented **Infrastructure-as-Code (IaC)**, **CI/CD pipelines**, and advanced **observability frameworks**, enhancing system performance, monitoring, and operational resilience.
- Applied deep expertise in **network and application security**, including **VPN design**, **logging & monitoring,** and proactive threat mitigation strategies.
- Mentored and guided cross-functional teams, promoting innovation, adherence to best practices, and knowledge-sharing across back-end, infrastructure, and security initiatives.
- Executed high-impact projects including scaling scraping infrastructure to **13M+ listings** and leading **RabbitMQ migration to a HA multi-node quorum cluster**, significantly enhancing system reliability and throughput, and contributed to the **addition of a new feature** in the **Ruby programming language.**

WORK EXPERIENCE

Sept'23 – Till Date: PriceLabs, Remote as Full Stack Software and Infrastructure Developer
InfraSec & DevOps | Sept'23 – Till Date
Responsibilities:

- Designing and operating high-throughput scraping infrastructure, ensuring availability and reliability.
- Automating deployments and infrastructure provisioning across distributed servers using Ansible.
- Managing MySQL clusters and server infrastructure, optimizing performance, stability, and security.
- Implementing centralized observability via ELK, Prometheus, PMM, and Grafana; developing custom exporters and watchdog tools.
- Configuring APM and Jenkins CI/CD pipelines for tracing, staggered deployments, and rollback support.
- Containerizing legacy services and orchestrating using Docker Swarm for cloud-native scalability.
- Enforcing network security with WireGuard VPNs; performing database audits and optimizations.

Highlights:

- Achieved 99.9% uptime via Infrastructure-as-Code–driven monitoring and microservices deployments.
- Reduced operational costs with XtraBackup and Docker-based backup solutions.
- Cut system load 5× using command-driven architecture with Redis and Sidekiq.
- Accelerated scraping throughput 6× via batch insertions, prepared statements, and connection optimization.
- Improved infrastructure latency by migrating Layer-7 traffic to HTTP/2.
- Designed and deployed Redis Sentinel architecture, eliminating single points of failure.
- Enhanced observability and alerting with custom exporters and dashboards.
- Introduced Software Composition Analysis (SCA) pipeline to identify dependency vulnerabilities early.

Full Stack Development
Responsibilities:

- Developing and optimizing back-end APIs with Ruby on Rails and Redis-backed sessions; maintaining Sidekiq background jobs.
- Building internal tools, including collaborative notes, command-driven workflows, and high-volume job processing.

Highlights:

- Improved API response times by reducing authentication-related database calls and shifting sessions to Redis.
- Built an internal TLS spoofing proxy capable of processing millions of daily requests.
- Optimized Sidekiq job execution and reduced memory usage through Ruby tuning.
- Open-sourced a Redis-backed rate limiter supporting fixed and rolling window algorithms.

Oct'24 – Feb'25: Data Cloud Gaze, Remote as DevOps and Security Developer

Highlights:

- Developed a plugin-extensible PostgreSQL containerization tool, streamlining and accelerating database deployment.
- Architected and executed cross-platform CI/CD pipelines with multi-cloud integration.
- Implemented DLL protection mechanisms, hardening applications against reverse engineering.
- Designed and deployed a secure license server from scratch for controlled and secure software distribution.
- Created automated build scripts and pipelines using Bash and PowerShell.

Oct'21 – Oct'22: RyoCurrency, Remote as Software Engineer

Highlights:

Security and Reverse Engineering

- Engineered a MITM proxy system to analyze and decode encrypted mobile application traffic.
- Built automation bots leveraging decompiled keys and heuristics for traffic and app behavior analysis.
- Implemented binary telemetry encoding to optimize data transmission security.

Software Engineering

- Architected and deployed a full-stack application from design to production.
- Containerized the entire stack (Django, scrapers, Nginx) for scalable deployment.
- Built a real-time Apache log visualization system with Sanic and Nginx.
- Optimized search infrastructure using Manticore, achieving 200% performance gains.
- Designed a scalable REST API handling millions of records with Django and PostgreSQL.

🎲 PROJECTS

Omamori — Network Security Solution (Ongoing)

Description: Omamori is an end-to-end network security and privacy platform delivering secure, scalable internet access via WireGuard VPN, DNS-level filtering, traffic control, and real-time observability.

- Engineered a cross-platform client-side VPN using WireGuard with a custom DNS stub resolver for secure traffic filtering and policy enforcement.
- Developed security and privacy features optimized for high-throughput environments with low latency.
- Building a B2B observability and security platform leveraging eBPF for real-time network and system monitoring, traffic analytics, and anomaly detection.
- Planning integration with AlienVault OTX threat intelligence feeds and Suricata IDS for advanced intrusion detection.
- Designing a scalable, fault-tolerant infrastructure capable of handling millions of concurrent user sessions with strict logical isolation.