

SELVARAJ IYYAPPAN

Python Full Stack Developer | DevOps Engineer

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[Portfolio](#) · [Blog](#) · [LinkedIn](#) · [GitHub](#)

PROFESSIONAL SUMMARY

Python Full Stack Developer and DevOps Engineer with 2+ years of experience designing scalable REST APIs, deploying production-grade full-stack applications, and managing Linux server infrastructure. Proficient in Django REST Framework, FastAPI, and Next.js, with hands-on expertise in Docker containerization, Nginx reverse proxy configuration, and CI/CD pipeline automation via GitHub Actions. Experienced in implementing JWT authentication, Role-Based Access Control (RBAC), and end-to-end deployment workflows that bridge backend engineering and DevOps operations to deliver reliable, high-performance systems.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript

Backend Frameworks: Django, Django REST Framework, FastAPI

Frontend Technologies: Next.js, React.js, HTML5, CSS3

Database: MySQL

DevOps & Deployment: Docker, Linux (Ubuntu), Nginx, PM2, VPS Management, Systemctl Services

Authentication & Security: JWT Authentication, Role-Based Access Control (RBAC), Permission Systems

CI/CD & Automation: GitHub Actions, Azure DevOps, Python Scripting, Cron Jobs

Tools & Cloud: Git, GitHub, Postman, VS Code, Azure, Prometheus, Grafana

PROFESSIONAL EXPERIENCE

DevOps Engineer

Kosoft IT Solutions · Aug 2025 – Present · Pondicherry, India

- Deployed Django, FastAPI, and Next.js applications on Linux VPS production servers, managing full end-to-end release workflows with zero-downtime deployment strategies.
- Configured and managed Docker containers ensuring environment consistency across development, staging, and production systems.
- Set up Nginx as a reverse proxy; configured PM2 for Node.js process lifecycle management and automatic service recovery.
- Built and maintained CI/CD pipelines using GitHub Actions and Azure DevOps, enabling automated builds, testing, and deployments from version-controlled repositories.
- Monitored Linux server health via systemctl, journalctl, and /var/log; proactively resolved deployment failures and infrastructure bottlenecks.
- Managed MySQL database backups, maintenance windows, and performance optimization to support production uptime and data reliability.
- Collaborated with development teams on environment configuration and deployment troubleshooting to reduce incident resolution time.

Python Developer

Kosoft IT Solutions · Apr 2024 – Aug 2025 · Pondicherry, India

- Developed and maintained scalable REST APIs using Django REST Framework and FastAPI, delivering backend services for multiple product modules.
- Implemented JWT-based authentication and RBAC with granular permission management, securing API endpoints across user roles.
- Integrated backend APIs with Next.js and React.js frontends, establishing clean HTTP/JSON communication contracts and data exchange patterns.
- Optimized MySQL database queries, indexes, and schema design, achieving measurable improvements to API response performance.
- Built Python automation scripts to eliminate repetitive manual tasks, reducing operational overhead and improving team efficiency.

- Managed Git-based version control workflows including branching strategies, pull requests, and code reviews for quality standards.
- Conducted thorough API testing with Postman, debugging, and code reviews to ensure production reliability and performance compliance.

KEY TECHNICAL PROJECTS

Project Management System — Work Tracker with RBAC • [Live Demo](#)

*Tech Stack: Next.js, Supabase, Vercel • Demo Credentials: interviewer@gmail.com / User@202**

- Built a production-grade project management and work tracker using Next.js with Supabase for authentication and real-time data sync.
- Implemented RBAC with Admin and Viewer roles, enabling fine-grained control over project visibility, tasks, and reporting access.
- Deployed on Vercel with automated CI/CD from GitHub and environment-based configuration management.

PyBackup Engine — Open-Source Python DevOps Backup Library • [PyPI](#) • [GitHub](#)

Tech Stack: Python, HTML, CSS, JavaScript

- Developed and published an open-source Python library on PyPI designed for DevOps engineers to automate database and system backups on Linux environments.
- Implemented multi-database backup support covering MySQL, PostgreSQL, MSSQL, and MongoDB with YAML-based configuration for zero-code automation setup.
- Built Nginx configuration and Linux service (systemctl) backup modules, enabling full system snapshot capture including reverse proxy configs and service definitions.
- Developed a web dashboard for visualizing backup history, monitoring job status, and managing backup schedules through a browser-based interface.

AI Agent Platform — MCP Server Integration, RBAC, and Payment System

Tech Stack: Next.js, FastAPI, MySQL, Ollama Cloud Models

- Engineered an AI Agent platform binding MCP (Model Context Protocol) servers for multi-tool AI orchestration, task automation, and dynamic tool selection.
- Built an interactive AI chat interface powered by Ollama Cloud Models with context-aware conversation management and persistent history.
- Developed a code editor playground supporting local directory scanning and AI-powered code analysis with intelligent developer recommendations.
- Designed three-tier RBAC (Admin, Manager, Member) controlling AI tool access, project resources, and platform administration features.
- Currently implementing a subscription-based payment system for premium feature gating and automated billing workflows across user account tiers.

EDUCATION

Bachelor of Science • Periyar Arts College • Graduated: 2023

CERTIFICATIONS & RECOGNITION

- Python Core Programming — Certification
- React.js Development — Internship Certification
- Rookie of the Year Award — Recognized for outstanding performance, rapid technical growth, and consistently strong delivery results in Year 1 at Kosoft IT Solutions