

Harish Kumar Samala

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PROFESSIONAL SUMMARY

Python Developer with expertise in building scalable web applications, RESTful APIs, and AI-powered solutions. Proven track record in developing GenAI chatbots using OpenAI and Mistral LLMs, optimizing backend systems, and delivering full-stack applications. Strong foundation in machine learning, data processing with PySpark and Pandas, and cloud deployment. Experienced in CI/CD automation, performance optimization, and cross-functional collaboration to deliver high-quality software solutions.

TECHNICAL SKILLS

Languages: Python, Java, SQL, TypeScript, JavaScript (ES6+)

Python Frameworks & Libraries: Flask, SQLAlchemy, Pandas, NumPy, PySpark, Scikit-learn, TensorFlow, PyTorch

Web Development: React, Spring Boot, RESTful APIs, HTML5, CSS, Tailwind CSS, Spring Data JPA (Hibernate)

AI & Machine Learning: OpenAI APIs, Mistral LLMs, Generative AI, XGBoost, Embeddings, Semantic Caching

Databases: MySQL, PostgreSQL, MongoDB, Oracle, SQL Query Optimization

Cloud & DevOps: AWS, Azure, CI/CD (Jenkins, Azure Pipelines), Git (GitHub, Azure DevOps), Railway.app, Vercel

Automation & Testing: Selenium, BeautifulSoup, Postman, JMeter, Nginx Configuration

Big Data: PySpark, Large Dataset Processing, Data Transformation & Analysis

PROFESSIONAL EXPERIENCE

Python Developer

Advanced Knowledge Technologies

Remote
Present

- Designed and implemented a domain-specific GenAI chatbot using OpenAI and Mistral LLMs with embeddings, semantic caching, and advanced text cleaning techniques, improving response quality by 40% and reducing latency by 30%.
- Built and optimized RESTful APIs with Flask and SQLAlchemy, enabling secure data exchange across internal systems and supporting 10,000+ daily API requests with 99.9% uptime.
- Enhanced PDF onboarding pipelines to process complex documents containing tables and forms, increasing document processing accuracy by 35% and reducing manual review time by 50%.
- Performed SQL-based data analysis on large datasets (1M+ records), implemented index tuning and query optimization, reducing average query execution time from 8 seconds to under 2 seconds.
- Developed web scraping and automation solutions using Selenium and BeautifulSoup, extracting and processing 100,000+ data points weekly for business intelligence and reporting.
- Utilized Pandas and NumPy for complex data transformation tasks, creating automated ETL pipelines that reduced data preparation time by 60%.
- Conducted API load testing with JMeter, identified performance bottlenecks, and implemented optimizations that increased API throughput by 45%.
- Configured and maintained Nginx as a reverse proxy and load balancer, improving application response times and enabling horizontal scaling.
- Actively participated in code reviews, technical documentation, and CI/CD pipeline management in Azure DevOps, contributing to a 25% reduction in deployment-related issues.

TECHNICAL PROJECTS

SparkleClean — Full-Stack Service Booking Platform | *React, TypeScript, Spring Boot, MySQL, Git*

- Developed production-ready full-stack web application with customer portal featuring multi-step booking forms, real-time appointment tracking, and QR code generation using qrcode.react and Web Share API.
- Engineered secure admin dashboard with password-protected access, full CRUD operations, booking approval workflows, and dynamic credential management using React Context API.
- Built Java Spring Boot backend with RESTful APIs, automated booking number generation, input validation, and MySQL database integration using Spring Data JPA (Hibernate).
- Implemented mobile-first responsive design with Tailwind CSS, ensuring seamless user experience across all devices and screen sizes.
- Deployed backend on Railway.app and frontend on Vercel with CI/CD integration, maintaining version control through Git and GitHub.

Superior Limousine LLC — Executive Transportation Website | TypeScript, Vite, Framer Motion, Vercel

- Designed and developed high-performance luxury transportation website using TypeScript and Vite, achieving 95+ PageSpeed Insights score through code splitting and lazy loading.
- Implemented mobile-first responsive design with fluid layouts, ensuring optimal viewing experience across desktops, tablets, and smartphones.
- Integrated Framer Motion for smooth animations and transitions, enhancing user engagement and creating premium brand experience.
- Optimized media delivery through Cloudinary CDN, reducing image load times by 70% while maintaining high visual quality.
- Applied SEO best practices and accessibility standards (WCAG), improving search engine visibility and usability for all users.
- Configured secure HTTPS deployment on Vercel with custom DNS setup via BigRock, ensuring reliable and secure web presence.

EDUCATION

New Jersey Institute of Technology

Master of Science in Computer Science

Newark, New Jersey

Graduated May 2024

Siddhartha Institute of Technology

Bachelor of Engineering in Computer Science

Hyderabad, India

Graduated August 2021

CERTIFICATIONS

AWS Certified Cloud Practitioner | Generative AI Foundations | Data Structures and Algorithms with Python