

Shivam Patil

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SUMMARY:

Software Engineer with 2+ years of hands-on experience in back-end development, building scalable systems and optimizing applications. Proficient in AI/ ML, Gen AI and Agentic AI.

TECHNICAL SKILLS:

- **Backend:** Python, JavaScript, FastAPIs, RestAPIs, Data Structures & Algorithms, Object Oriented Programming.
- **Technology:** Git, Github, Redis, Docker, Apache Kafka, Snowflake, Web Sockets, Kubernetes, CI/CD.
- **Cloud & Database:** MySQL, PostgreSQL, Qdrant, Hadoop, AWS, Azure.
- **AI/ML & GenAI:** LlamaIndex, LLMs , Ragas, Docling, GPT-OSS, TensorFlow, LangChain, RAG.

PROFESSIONAL EXPERIENCE:

Software Engineer (SE) – Tata Consultancy Services | Jan 2025 – Present

- Developed 13+ REST APIs serving 10,000+ daily requests, reducing response latency by 33%.
- Optimized SQL queries and data processing pipelines, improving application performance by 29%.
- Enhanced RBI chatbot retrieval and response generation quality through prompt optimization, vector search tuning, and evaluation frameworks, improving answer accuracy by 19%.
- Implemented authentication and authorization mechanisms using secure access-control frameworks and enterprise security standards.
- **Concepts:** System Design, Distributed Systems, SDLC, Design Patterns, Event-Driven Architecture

Software Engineer (SE) – Master Electronics | Jun 2024 – Dec 2024

- Designed and deployed Python-based AI/ML applications for predictive analytics and intelligent automation.
- Developed backend APIs and data pipelines to support AI-powered academic and engineering projects.
- Integrated machine learning models into web applications, enabling real-time inference and analytics.
- Applied software engineering best practices including version control, testing, and code optimization.

EDUCATION:

B.Tech in Artificial Intelligence and Data Science | Savitribai Phule Pune University | July 2020 to June 2024 | GPA: 8.88/10

CERTIFICATIONS:

- Microsoft Certified: Azure Data Scientist Associate [\[Link\]](#) 2026.
- AWS Certified Developer – Associate [\[Link\]](#) 2026.

PROJECTS:

Secure Banking System – Decentralised Blockchain-Based Banking System

Tech Stack: Python, Django, Hyperledger Fabric, Web3.py, Kafka, Kubernetes, Vault, Prometheus, Grafana

- Designed a blockchain-based banking platform using Hyperledger Fabric, enabling secure transaction processing.
- Developed scalable APIs with Django, Kafka, and PostgreSQL to support high-volume financial transactions.
- Implemented security, caching, and deployment using OAuth2, Redis, Docker, Kubernetes, and AWS.

Online Examination System – Designed a Scalable Test-Taking Platform

Tech Stack: Python, FastAPI, PostgreSQL, Redis, Docker, NGINX, AWS, JWT Authentication

- Engineered scalable distributed systems handling high-concurrency user traffic with optimized load balancing.
- Implemented secure data processing pipelines with encryption, access controls, and compliance-driven safeguards.
- Designed fault-tolerant real-time scoring frameworks leveraging caching mechanisms for low-latency performance.

RAG with RBAC, Guardrails and Monitoring – Gen AI Project

Tech Stack: Python, Qdrant, Streamlit, Ragas, Docling, Milvus, Streamlit, AWS

- Built secure enterprise-grade RAG pipelines with RBAC and Milvus vector databases for knowledge retrieval.
- Implemented robust security guardrails for PII masking and intelligent out-of-scope query detection.
- Integrated comprehensive Ragas monitoring framework for retrieval accuracy and response quality evaluation.