

# Sanket Ughadmathe

Senior Python Developer | Generative AI & Scalable Backend Systems

Navi Mumbai, India | sanketughadmathe@gmail.com | +91 9167235598

codewithsanket.dev | github.com/sanketughadmathe | linkedin.com/in/sanketughadmathe

## Professional Summary

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Senior Python Developer with 5+ years of experience building scalable backend systems, data pipelines, and AI-powered platforms. Experienced in designing production-grade APIs, distributed data processing systems, and LLM-integrated applications. Currently building an AI-native document intelligence platform focused on retrieval, reasoning, and conversational document workflows.

## Professional Experience

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### Cymulate

Israel

*Python Developer – Security Automation & Data Platforms*

Jan 2024 – Present

- Designed and deployed a **production-grade IOC Automation platform** integrating **12+ enterprise security systems** (CrowdStrike, SentinelOne, Palo Alto, Microsoft Defender, Cisco Umbrella), reducing manual response effort by **60%**.
- Built **distributed ETL pipelines using PySpark** processing **5M+ security events** from **AWS S3**, transforming large-scale JSON datasets into normalized schemas.
- Architected **scalable data ingestion workflows** enabling **AI-ready structured datasets** for downstream analytics and automation.
- Implemented **multithreaded API integrations** with retry logic, exponential backoff, deduplication, and structured logging.
- Deployed **serverless Spark workloads using AWS Glue** and implemented secure credential management via **AWS Secrets Manager**.
- Containerized backend services using **Docker** enabling reproducible deployments and enterprise distribution.
- Implemented system **telemetry and observability** using **Elasticsearch-based logging**.

### Artha Intelligent

AI-Powered Financial Analysis Platform

*Co-founder & Technical Lead*

Sep 2024 – Jul 2025

- Led **backend architecture** for an **AI-driven financial analysis platform** using Python and FastAPI.
- Designed **LLM-powered financial insight workflows** using **CrewAI multi-agent orchestration**.
- Built **autonomous multi-agent systems** for data extraction, analysis, and automated report generation.
- Implemented **Retrieval-Augmented Generation (RAG)** pipelines using embeddings and contextual retrieval mechanisms.
- Developed **scalable REST APIs** serving real-time **LLM inference** to web and browser clients.
- Built **low-latency backend infrastructure** using Supabase and async processing pipelines.

### Osource Global Pvt. Ltd.

Navi Mumbai, India

*Lead Python Developer & Analytics Manager*

Aug 2021 – Jan 2024

- Architected **production-grade backend systems** for document intelligence, identity verification, and data extraction.
- Built a **CV Parsing platform** using OCR, NLP, and custom NER pipelines to extract structured candidate data.
- Designed **REST APIs** for resume ingestion, structured data extraction, translation, and audit logging.
- Developed an **E-Invoicing automation system** using OpenCV-based QR extraction and secure authentication workflows.
- Built **Aadhaar verification services** for document decoding and structured validation pipelines.
- Designed **modular service-layer architecture** improving system maintainability and scalability.

### RBHU Analytics

Navi Mumbai, India

*Power BI Developer*

Dec 2020 – Jul 2021

- Built **financial dashboards** tracking **100+ crore transactions**.
- Designed **DAX analytical models** and interactive reporting solutions.

## Selected Projects

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### PaperVault – AI-Native Document Intelligence Engine (In Progress)

- Architecting an **AI-native document intelligence platform** enabling semantic search, multi-document reasoning, and conversational querying.
- Designing a **production-grade RAG pipeline** with hybrid semantic + keyword retrieval and LLM-based reranking.
- Implementing **multi-provider LLM resilience** with fallback providers, retry logic, and circuit breaker patterns.
- Building **hallucination guardrails** including abstention logic, confidence scoring, and evaluation harness.
- Developing **distributed document processing pipelines** with chunking strategies, embedding generation, and FAISS vector indexing.
- Implementing **multi-layer caching** and observability to monitor latency (P95), cost per query, and failure rates.
- Containerizing the AI engine using **Docker** for reproducible local and cloud deployment.

## Technical Skills

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**Languages:** Python, JavaScript, SQL

**Backend:** FastAPI, Flask, REST APIs, Async Processing, Microservices

**Generative AI:** LLM Integration, Prompt Engineering, RAG, Multi-Agent Systems, Embeddings, Semantic Search

**Data Engineering:** PySpark, ETL Pipelines, Data Processing

**Cloud & Infrastructure:** AWS (S3, Glue, EC2, IAM, Secrets Manager), Docker

**Databases:** PostgreSQL, MongoDB, Supabase, MS SQL Server

**Monitoring:** Structured Logging, Elasticsearch

**Security:** Threat Intelligence, IOC Automation, EDR Integrations

## Education

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### B.E. Mechanical Engineering

Thakur College of Engineering & Technology, Mumbai University