

MALHAR KULKARNI

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PROFILE SUMMARY

Software Engineer with 1.5+ years of experience in Kubernetes-based microservices environments at TCS. Strong focus on Python backend development, automation scripting, and SQL-based data handling. Hands-on experience in containerization (Docker), orchestration (Kubernetes), and event-driven systems using Kafka. Passionate about building scalable backend systems and transitioning into high-performance distributed systems roles.

TECHNICAL SKILLS

Languages	Python, Java, SQL (PostgreSQL/Oracle)
Backend	FastAPI, Flask, Spring Boot, REST APIs, API Design
Messaging	Apache Kafka (Producers, Consumers, Log Streaming)
Frontend	React, HTML/CSS
DevOps & Tools	Kubernetes, Docker, Git, Postman

EXPERIENCE

Associate System Engineer - Tata Consultancy Services (TCS) Nov 2024 - Present

Project: Core Banking Microservices

Mumbai

- Developed and maintained **Python-based backend scripts and services**, handling business logic, automation, and data processing in microservices environment.
- Worked extensively with **SQL databases** for complex queries, data validation, log analysis, and production issue troubleshooting.
- Built and optimized **REST APIs using Python (Flask)**, enabling seamless communication between services and external systems.
- Contributed to frontend by integrating APIs in **React**, handling data fetching, state updates, and UI interaction with backend services.
- Designed and maintained **log processing and monitoring scripts in Python**, improving system observability and debugging efficiency.
- Used **Apache Kafka** for log streaming and log shipping pipelines, enabling centralized logging and real-time data flow across services.
- Worked on **Kubernetes deployments and configurations**, including troubleshooting pod failures, resource issues, and environment setups.
- Utilized **Docker** for containerizing applications and supporting consistent deployment workflows.
- Collaborated across teams to resolve production issues using **Python debugging, SQL queries, and system logs**.

Tech Stack: Python, FastAPI, Java, Spring Boot, Apache Kafka, SQL, Docker, Kubernetes, Git.

Blockchain Developer Intern - DApps World

Mar 2023 - May 2023

Project: Decentralized Social Media Application.

Pune (Remote)

- Developed a **Web3 social application** using **Lens Protocol** on the **Polygon network**.
- Implemented frontend state management using **React.js** and integrated **Ethers.js** for MetaMask interactions.

Tech Stack: Solidity, Metamask, ReactJS, Web3.js, API, GitHub.

PROJECTS

Banking Microservices System (Development to Deployment)

- Developed **microservices** using **Python (FastAPI)**, **Java (Spring Boot)**, and **Golang**.
- Containerized services using **Docker** and deployed them on **Kubernetes**.
- Implemented **inter-service communication** using **REST APIs**.
- Integrated **Apache Kafka** for **log shipping** and asynchronous communication.
- Managed **deployment, scaling, and monitoring** using Kubernetes.

Finance Analytics & Prediction Application

- Built a full-stack application using **Python (Flask)** and **React**.
- Integrated **Yahoo Finance API** for real-time and historical data.
- Used **Prophet model** for stock price forecasting.
- Developed **financial calculations** (intrinsic, extrinsic values, portfolio analysis).
- Designed **REST APIs** for backend processing.

Zero Knowledge Proof Based Smart Contract System

- Designed a **blockchain-based system** using **Solidity smart contracts**.
- Implemented **secure validation logic** where blockchain verifies transactions without exposing sensitive data.
- Developed and deployed **smart contracts** for agreement validation between users.
- Integrated **React + Web3** for frontend interaction.
- Focused on **secure, tamper-proof validation** using blockchain.

EDUCATION

BE (Information Technology) , Sinhgad College of Engineering, Pune	2024 — 8.62 CGPA
HSC , Bharat Jr. College, Buldhana	2020 — 84.92 %
SSC , S.E.S High School S.Kherda	2018 — 96.40 %

EXTRAS

Certifications: AWS Certified Cloud Practitioner, Full Stack Web Development.