# Akshay N Chalvetkar
## *Python Developer*

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5+ years of experience as a backend developer specializing in Python, building scalable APIs, optimizing web applications, and managing databases. Proficient in FastAPI, Django REST Framework, and cloud technologies, with a strong focus on delivering measurable business impact.

## Experience

**Senior Product Engineer at LTIMindtree**                    *March 2024 - Present*

**Project: AI SERVICES**                                      *May 2025 - Present*

- Developed a Project Performance Analyzer using Snowflake Cortex Analyst with NLP, enabling dynamic SQL generation from natural language inputs. Implemented as a multi-agent system with real-time, event-driven communication via a Socket.IO backend, supporting interactive data visualization and asynchronous responses.
- Developed an end-to-end Retrieval-Augmented Generation (RAG) system to process unstructured documents and enable context-aware question answering, implementing document parsing, chunking, embedding generation, and semantic search for accurate and relevant AI responses.

**Project: FOSFOR**                                           *March 2024 - April 2025*

A Data analyzing web application for business markets using AI that provides insights like why something happened, what changed, what is the impact and what will come next without relying in data experts.

- Developed and maintained RESTful APIs for web applications using FastAPI, ensuring high performance and scalability.
- Integrated Socket.IO with FastAPI using strict WebSocket protocol, reducing response time by 25% and optimizing bandwidth usage.
- Designed and implemented end-to-end data workflows for the NLP and Insights teams, including caching mechanisms, data retrieval from MongoDB, and preprocessing steps to ensure delivery of clean, structured data in the required format.
- Resolved CAST and SAST vulnerabilities across all Python repositories, enhancing code security and compliance with best practices.
- Refactored monolithic Python scripts into structured Model-View architecture across all repositories to improve scalability, maintainability, and code organization which helped developers to debug code easily.
- Developed a centralized logging mechanism to standardize log formats and integrated it across all Python repositories for consistent monitoring and debugging.
- Developed and automated a migration script for transitioning data from the old MongoDB database to the new database for the Ask project, ensuring seamless data transfer and minimal downtime of 3 hour.
- Developed comprehensive test cases using pytest for the entire workflow, ensuring over 80% test coverage and validating functionality across the codebase.
- Actively participating in team discussions to shape the life cycle development of new applications, ensuring a collaborative and effective approach to project success.

- Managed Helm charts for deployment, optimizing pod resources by considering load and memory requirements to ensure efficient scaling and performance by monitoring Grafana.
- Working on IDE tools like PyCharm, Visual Studio Code , Jupyter Notebook and Anaconda .

## Backend Developer at Repos Energy India Private Limited     *Sep 2022 - March 2024*

### Project: CUSTOMER APPLICATION

RUBI is a user-friendly app redesign with enhanced UI/UX, catering to customer needs. It offers various features like orders, dashboard, assets, profile, payments, and complaint submission
Technologies: Python, Django REST, AWS S3, EC2, SNS

### Project: PARTNER APPLICATION

The partner application focuses on UI/UX enhancements, enabling partners to accept or reject orders initiated by customers. Features include a comprehensive dashboard displaying partner details, an orders page for tracking past and upcoming orders, a profile page, pump management, refueler rate updates, and a payments section.
Technologies: Python, Django REST, AWS S3, EC2, SNS

### Project: CRM APPLICATION

The CRM application facilitates lead management, empowering users to add, delete, and transfer leads to their respective owners. It offers advanced authorization levels and enables filtering leads by state, territory, and owners. Additionally, users can create and send purchase orders and booking information via email to end customers.
Technologies: Python, Django REST, AWS S3, EC2, SNS, Docker

- Working as a backend developer creating REST API's for 3 Applications using Python and Django Rest Framework and manage database connections.
- Working closely with frontend and mobile teams to enhance user interface functionality by seamlessly integrating APIs, contributing to an improved overall user experience.
- I am managing the code versioning with Bitbucket and responsible for the deployment to staging and production environment on AWS servers.
- Played a pivotal role in the development of APIs for the IoT department, utilising Node.js and JavaScript. Effectively implemented MongoDB as the database solution, ensuring seamless storage and retrieval of data for the application.
- Successfully developed and containerized applications, overseeing the entire Dockerization process and ensuring a smooth deployment to the production environment.
- Implemented several cron jobs to handle asynchronous tasks, resulting in a 20% reduction in server load.Implemented efficient ORM models and MongoDB Schemas, optimising data storage and retrieval processes
- Collaborated with cross-functional teams to successfully design and develop a new web application using Django. Achieved a notable 30% increase in data accuracy, a 25% reduction in manual data entry, and a substantial 20% cost saving, contributing to the overall efficiency and profitability of the organization.
- Actively participating in team discussions to shape the life cycle development of new applications, ensuring a collaborative and effective approach to project success.
- Effectively integrated third-party ERP systems, including those from Shell and Tata, with our application's backend infrastructure, enhancing overall system interoperability and performance
- Working on IDE tools like PyCharm, Visual Studio Code , Jupyter Notebook and Anaconda .

**Application Developer at IBM**                                    *Feb 2020 - Sep 2022*

**Project : AIRBUS**

Airbus SE is a major European aerospace corporation with three core units. Its main focus is on designing and manufacturing commercial aircraft, complemented by its provision of online services to customers.

- Developed and implemented a Python-based algorithm to optimize database queries, resulting in a 80% reduction in query time and improved system performance.
- Collaborated with a team of developers to troubleshoot and debug existing code, resulted in improved application stability.
- Troubleshot and debugged issues in existing codebase by analysing the logs in Kibana
- Wrote automated scripts to improve existing processes, reducing manual effort by 50% and increasing team productivity.
- Created and maintained documentation for the application, ensuring ease of use for future developers and reducing onboarding time by 20%.

# Education

**Visvesvaraya Technological University**                          *Aug 2015 - June 2019*

- Bachelor of Engineering
- Major in Electronics and Communication                          *CGPA - 8.6*

# Skills

- Python
- Django REST Framework.
- FAST API
- Docker
- AWS (EC2 , S3 Bucket, VPC, Subnets, SNS).
- Posgresql, Mongodb.
- Linux - Shell scripting
- Git
- Snowflake
- Langchain

- LangGraph
- Problem Solving
- Software Development Life Cycle
- User Acceptance Testing
- Kibana
- Grafana
- Analytical and Research
- Windows, macOS and Linux