Shivam Sood (Python developer | Backend Engineer)

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CAREER SUMMARY

Python Developer with strong expertise in backend development, real-time API integrations, and AI-driven solutions. Experienced in building scalable and efficient backend services using FastAPI and Flask, with proficiency in SQL for data-driven analytics and performance monitoring. Skilled in integrating AWS-based voice and chat automation systems and optimizing backend systems for reliability and speed. Adept at designing microservices architectures and leveraging cloud-native tools for automation and scale. Possess a strong foundation in Artificial Intelligence and Machine Learning, with a keen interest in enabling intelligent customer interactions through innovative technologies

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SKILLS AND STRENGTHS

- **Programming Language**-Python, C
- **Database** - MYSQL, Redis,Mongodb
- **Frameworks & APIs**: FastAPI, Flask
- **Machine Learning** - Pytorch, Scikit-learn, Computer Vision, NLP
- **Tools & Tech** - Git, AWS lex and lambda, Docker, Google STT and TTS
- **Others -** RAG, AWS, REST APIs, WebSocket Servers,Real-Time Analytics, Telephony Integration

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WORK HISTORY

Software Engineer , C -Zentrix

Feb 2025 - Present

- Developed a real-time voice bot using PipeCat, integrating various Text-to-Speech (TTS), Speech-to-Text (STT) systems, and Large Language Models (LLMs) for dynamic conversational AI. Worked with
- multiple voice processing modules to evaluate and improve system accuracy, latency, and naturalness. Separately built RESTful APIs using FastAPI for internal tool development and backend
- services, improving modular deployment and performance monitoring

Python Devloper, Intern,Namasys Analytics

Feb - Aug 2024

- Designed and managed data pipelines and workflows using Azure and EC2, leveraging Docker for containerization to ensure scalable and reliable data engineering solutions
- Implemented and maintained database systems, including routine backup processes and performance optimization to ensure data integrity and availability.
- Developed and managed logging mechanisms for monitoring and troubleshooting, enhancing system reliability and operational efficiency

Python Devloper Intern, QUBITNETS TECHNOLOGIES

NOV - DEC 2023

- AI & Backend Engineer with expertise in scalable backend development (FastAPI, Django, Flask), microservices, real-time API integrations, and cloud-native tools; skilled in SQL and AWS-based automation systems
- Hands-on experience in AI/ML and Computer Vision, including image recommendation systems, GANs, diffusion models, and YOLOv8 for real-time object detection, delivering intelligent

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MAJOR PROJECTS

Sanghvi Bot

Technologies: FastAPI, AWS Lex, Google STT/TTS, WhatsApp Business API

- Developed FastAPI microservices for real-time communication with AWS Lex and Google TTS/STT.
- Designed secure REST APIs for session handling and message delivery.
- Ensured low-latency architecture and seamless voice/text experience for users.

Banking Bot

Technologies: FastAPI, WebSockets, Ultravox, Telephony APIs
- Built a speech-to-speech banking assistant that interacts with users via phone, powered by Ultravox Al.
- Captured user audio via telephony, relayed it through a FastAPI-based WebSocket server to Ultravox for speech recognition and response.
- Based on user financial data fetched from APIs, the bot suggests Fixed Deposit options, interest rates, and potential returns based on tenure and amount.
- Used Ultravox Al's official platform for intelligent responses, ensuring natural, human-like conversation delivery back to users in real time.

Agent Performance Analytics

Technologies: Python, FastAPI, SQL, Grafana
- Designed and implemented dashboards to monitor agent productivity in real time.
- Automated performance metrics via FastAPI and SQL-based analytics.

Voice Bot using PipeCat

Technologies: FastAPI, WebSockets, Pipecat,Google STT,Deepgram Telephony API**s**
- Developed a modular Python backend using FastAPI for managing real-time voice bot processing pipelines.
- Integrated TTS, STT, and LLMs through REST APIs ensuring seamless communication between components.
- Optimized latency and accuracy by designing efficient routing, error handling, and logging mechanisms

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EDUCATION

World College of Technology and Management, Maharishi Dayanand University   2021–2025

Bachelor of Technology (Artificial Intelligence – Data Science)

S . B . V No. 2 ,Delhi   2020–2021

12th percentage 84%