

ALI MIRSA

Backend Python Developer

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SUMMARY OF PROFILE

I'm a self-taught backend developer with 2 years of experience, specializing in Django, FastAPI, and Python. I have a strong passion for building scalable web applications and optimizing performance. My expertise includes designing RESTful APIs, working with databases like PostgreSQL and MongoDB, and implementing WebSockets for real-time communication. I also have hands-on experience with Redis for caching and message brokering, along with Crewai, an agent framework for AI-driven applications. I thrive on solving complex problems, collaborating with teams, and continuously learning to stay ahead in the ever-evolving tech world

SKILLS

- **Backend Development** - Django (DRF), Fastapi, Crewai
- **Frontend Development** - Bootstrap, HTML, CSS
- **Integrations** - Razorpay, Stripe, websocket, wit.ai, Google Auth, Firebase Verification, Hugging face
- **Data Structure** - Linked List, Searching, Sorting, Stack, Queue, HashMap, Tree, Trie, Graph
- **Database** - SQL, No SQL (MongoDB, PostgreSQL, MySQL)
- **Deployment** - NGINX, AWS EC2, S3
- **Tools** - Redis, Docker, Git, Postman, Figma
- **Other** - ORM, ML, LLM

WORK EXPERIENCE

Software Engineer (Backend & AI Agents), Nypus Ernakulam, Kerala

1/2025-Present

- Designed and developed multi-agent systems using **CrewAI**, enhancing automation and AI-driven workflows.
- Integrated multi-agent systems with the **Django** backend, ensuring seamless interaction between AI agents and web applications.
- Implemented **WebSocket**-based real-time communication, enabling efficient data exchange between agents and the backend.
- Utilized **Redis** for caching, message queuing, and optimizing performance in agent interactions.
- Developed robust APIs for agent communication and data processing, improving backend efficiency.
- Optimized system performance and scalability, ensuring smooth deployment and integration of AI agents.

Backend developer, Innodot Innovation Trivandrum, Kerala

1/2024-12/2024

- Designed and developed RESTful APIs using **Django** and **FastAPI**, ensuring high performance and scalability.
- Collaborated with React and Flutter developers to integrate backend services seamlessly with frontend applications.
- Worked in a team of **5 developers**, contributing to efficient project execution and agile development.
- Led the backend development for multiple projects, including:
 - **Hospital Management System (HMS)** – Developed key modules for patient management, appointment scheduling, and billing.
 - **E-commerce Platform** – Built secure and scalable APIs for product listing, cart management, and payment processing.
 - **E-learning Platform** – Created API endpoints for course management, user authentication, and progress tracking.

Python Django Developer Intern, Brototype

6/2023 - 1/2024

PROJECT

Smartphone E-Commerce Platform (with image detection)

[GitHub](#)

Developed a comprehensive e-commerce platform specializing in smartphones, featuring an extensive range of functionalities catering to both users and administrators.

- **Chatbot Integration:** Implemented a chatbot using **Wit.ai** to assist customers with product availability inquiries and order status tracking.
- **Image Detection:** Added an **ML model** for image detection to improve user experience with accurate product recommendations.
- **Payment Options:** Integrated multiple payment methods, including **Wallet Payment, Razorpay, and Cash on Delivery**, to enhance user convenience.
- **User Interfaces:** Designed user-friendly interfaces for essential features such as **cart, wishlist, product viewing, and coupon management**.
- **Admin Features:** An admin interface with functionalities to add products, manage product categories, handle inventory management, and perform image cropping.
- **Hosting and Version Control:** Deployed the application on **AWS (EC2)** and managed version control with Git, ensuring smooth deployment and maintenance.

Technologies Used - **Django, Python, AWS (EC2), Razorpay, PostgreSQL, HTML, CSS, JavaScript, Git, Wit.ai, Image Detection**

Employment Payroll Management Software

[GitHub](#)

Developed a dynamic payroll management system designed to streamline employee payment processes while maintaining robust data security.

- **Employee Management:** Enabled adding and updating **employee details**, including personal and professional information.
- **Bank and Salary Integration:** Incorporated features to manage **bank details** and **salaries**, ensuring compliance with organizational policies.
- **Custom Rule Settings:** Allowed the creation of customizable rules for salary computation, such as **tax deductions and bonus allocation**.
- **Collaboration:** Built the backend using Django and integrated the **React-based frontend developed in collaboration with a colleague**.
- **User Interface:** Designed user-friendly interfaces for seamless navigation and management by HR personnel.
- **Scalability:** The system is designed to support future features like real-time salary analytics and integration with attendance systems.

Technologies Used: **Django (DRF), Python, PostgreSQL, Git.**

AI Real-Time Avatar Interaction

[GitHub](#)

Developed an interactive AI avatar for real-time communication, featuring a 3D avatar model loaded in the web using Three.js. Integrated **WebSocket** for real-time interaction and utilized **Gemini** for processing. Implemented **Rhubarb** for accurate lip-syncing and a **Hugging Face** model for emotion detection in text. Enhanced the avatar's communication capabilities with **TTS** and **PyAudio** for audio processing.

- Key Features: Real-Time Interaction, Lip-Syncing, Emotion Detection, TTS Integration

Technologies Used - **Django, WebSocket, Gemini, Rhubarb, Hugging Face, TTS, PyAudio, JavaScript, Python**

EDUCATION

B.tech in Mechanical

mea engineering college
malappuram

8/2019-5/2023