# **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 EXPERIANCE

# Software Engineer (Backend & Al Agents), Nypus

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 Al 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

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.

# **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**

<u>GitHub</u>

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**