AI-Powered Interactive Portfolio Builder

Project Report

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Abstract

The AI-Powered Interactive Portfolio Builder is an intelligent web platform that allows users to create professional digital portfolios easily. It combines AI-based resume parsing, manual data entry, and a smart portfolio chatbot that interacts with portfolio visitors.

Users can upload their resumes in PDF format, and the AI automatically extracts their personal details, education, work experience, and skills to generate a fully responsive portfolio website.

What makes this project unique is its AI Chatbot Assistant embedded in the portfolio. When someone visits the portfolio, the chatbot acts as a virtual guide, introducing the user's profile, projects, and achievements conversationally.

Objectives

1. To develop a system that generates a professional portfolio automatically using AI.
2. To allow users to upload their resumes and extract information automatically.
3. To integrate a chatbot that interacts with portfolio visitors and describes the user's profile.
4. To make the portfolio interactive and AI-driven instead of static.
5. To showcase the use of AI, NLP, and Web Technologies in real-world applications.

Technologies Used

Frontend: HTML5, CSS3, JavaScript, Bootstrap

Backend: ASP.NET Core MVC (C#)

Database: SQL Server

AI Modules: iTextSharp / Tesseract OCR (Text Extraction), OpenAI / GPT API (Chatbot)

APIs: RESTful APIs for chatbot and backend communication

Version Control: Git & GitHub

IDE: Visual Studio / VS Code

System Architecture

1. User Dashboard (Creator View): Upload resume or manually enter information. AI extracts fields and generates the portfolio.

2. Portfolio Website (Public View): Displays generated portfolio with chatbot for visitors.

3. AI Chatbot Engine: Uses NLP to understand visitor questions and describe the portfolio owner.

Example Chatbot Interaction

Visitor: Who is Muhammad Dawood?

Chatbot: Muhammad Dawood is a passionate Frontend Developer specializing in ReactJS and Tailwind CSS. He has built several responsive and interactive web applications.

Visitor: Tell me about his latest project.

Chatbot: His latest project is an AI-powered Portfolio Builder that generates portfolios automatically using resume data and integrates a smart chatbot for visitors.

AI Integration Details

1. Resume Extraction: Extracts data from PDF resumes and converts to structured fields.

2. Chatbot Data Training: Stores user details like name, role, skills, and projects to train the chatbot.

3. Chatbot Response Flow: Visitor query -> Backend API -> AI model -> Conversational reply.

Project Schedule

Phase 1: Requirements & Research – 1 week

Phase 2: Design – 1 week

Phase 3: Backend Development – 2 weeks

Phase 4: AI Resume Extraction – 2 weeks

Phase 5: Chatbot Integration – 2 weeks

Phase 6: Frontend + Portfolio Design – 2 weeks

Phase 7: Testing & Deployment – 1 week

Phase 8: Documentation & Presentation – 1 week

Total Duration: 10 weeks

Expected Outcomes

✓ Automatic data extraction from resumes

✓ AI-generated professional portfolio

✓ Chatbot that describes portfolio to visitors

✓ Saves time and improves first impressions

Future Enhancements

- Voice-enabled chatbot assistant

- Multiple portfolio theme options

- Integration with LinkedIn and GitHub APIs

- Visitor analytics dashboard

Conclusion

This AI-Powered Interactive Portfolio Builder transforms a static portfolio into an intelligent, conversational experience. It uses AI not only to build the portfolio automatically but also to make it self-explanatory and engaging for visitors. The chatbot acts as a virtual presenter, allowing visitors to understand the user's skills, work, and achievements easily.