

Smart Resume Builder with AI Suggestions – Project Report

Introduction

In today's digital-first job market, having a professional resume is crucial for job seekers. Traditional resume builders lack personalized guidance and often fail to highlight strengths effectively. This project, *Smart Resume Builder with AI Suggestions*, addresses that gap by integrating AI to generate tailored content suggestions based on user inputs, streamlining the resume creation process for users of all backgrounds.

Abstract

The Smart Resume Builder is a full-stack web application designed to help users create polished, professional resumes. Beyond standard form inputs for name, education, experience, and skills, this application integrates AI-based text generation to provide suggestions for summaries and achievements. Additionally, it supports uploading a profile photo, viewing a live preview, and exporting the final resume as a PDF. The app offers a clean UI with editable sections and allows users to dynamically add projects and education entries.

Tools Used

- **Frontend:** React.js
- **Backend:** Node.js, Express.js
- **AI Integration:** Open Router API
- **PDF Export:** html2pdf.js
- **Authentication:** Clerk
- **Styling:** Tailwind CSS, plain CSS
- **Database:** MongoDB (for storing resumes)

Steps Involved in Building the Project

1. Requirement Analysis & Planning

- Identified essential resume fields and user flow.
- Defined AI use case: suggestion generation for summary and content.

2. Frontend Development

- Created ResumeForm.jsx for dynamic input collection.
- Enabled profile photo upload and dynamic addition of education/projects.
- Designed ResumePreview.jsx and ResumeBuilder.jsx for real-time live preview.

3. AI Integration

- Implemented OpenRouter-backed endpoint for personalized text suggestions.
- Triggered AI suggestions on form submission and displayed them in real-time.

4. Backend Setup

- Built APIs using Express.js to store resume data and call AI endpoints.
- Handled image size checks and data formatting for consistency.

5. Export & Save Features

- Integrated html2pdf.js to allow clean, professional PDF downloads.
- Enabled image inclusion and formatting consistency in exported documents.

6. Authentication & Dashboard

- Integrated Clerk for secure user sign-in.
- Created a dashboard to view, edit, and manage multiple resumes.

Conclusion

The Smart Resume Builder with AI Suggestions successfully bridges the gap between resume creation and content curation. With a user-friendly interface and intelligent assistance, it empowers individuals to create effective, personalized resumes with minimal effort. The project demonstrates the potential of combining modern frontend frameworks with AI and cloud technologies to solve real-world problems efficiently.