

AI Resume Builder - Project Report

1. Project Title

AI Resume Builder

2. Objective

The AI Resume Builder aims to simplify the resume creation process by leveraging AI to generate professional, customized resumes based on user inputs. It allows users to:

- Input personal, educational, and professional details.
- Choose from multiple resume templates.
- Generate a formatted resume instantly.
- Download the resume in PDF format.

3. Tools and Technologies

- Frontend: React.js, HTML, CSS, JavaScript
- Backend: Node.js, Express.js
- Database: MongoDB / Firebase (optional for storing user profiles)
- AI / NLP: OpenAI GPT API (for generating content summaries and suggestions)
- Others: PDF generation library (e.g., jsPDF), React Router

4. Features

1. User Input Form: Collects user data including personal info, skills, education, experience, and projects.
2. AI Suggestions: AI assists in improving bullet points, summarizing experiences, and optimizing resume content.
3. Template Selection: Multiple resume templates for professional output.
4. PDF Download: Users can download the final resume in PDF format.
5. Optional Storage: Users can save resumes for future updates.

5. Project Architecture

Flow:

1. Frontend (React): User enters details -> selects template -> preview resume.
2. Backend (Node.js + Express): Receives data -> processes AI suggestions -> returns formatted

content.

3. AI Integration: GPT API generates improved content.

4. PDF Generation: Resume rendered in selected template -> downloadable as PDF.

Architecture Diagram:

User Input -> Frontend (React) -> Backend (Node.js + Express) -> AI (GPT API) -> PDF Generation
-> Download/Preview

6. Implementation Steps

1. Setup React project and backend server.
2. Create input forms for user details.
3. Integrate AI API for content enhancement.
4. Implement resume templates using HTML/CSS.
5. Enable preview and PDF generation using jsPDF.
6. Optional: Connect database for saving resumes.

7. Sample Screenshots

(Add screenshots of your app here)

8. Challenges Faced

- Integrating AI suggestions dynamically in the template.
- Generating multi-format resumes (PDF and preview).
- Maintaining responsive design for all templates.

9. Outcome / Result

- Users can create professional resumes quickly.
- AI assistance improves quality and readability.
- Flexible templates and PDF export make the tool practical.

10. Future Enhancements

- Add multilingual support.
- Include cover letter generation using AI.
- Add resume scoring feature based on job descriptions.
- Integrate authentication for user accounts and resume management.

11. Repository Link
(GitHub Repository Link)