
Smart Resume Builder with AI Suggestions

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Project Domain: Full Stack Web Development (Java + React)

Abstract

The *Smart Resume Builder with AI Suggestions* is a full-stack web application designed to simplify the process of creating professional resumes. It allows users to enter personal and career-related details, automatically store them in a database, and download the resume file in a format. The system integrates a basic AI suggestion engine that analyzes the user's entered skills and provides real-time improvement suggestions — helping users enhance their resumes and profile strength for job readiness.

Objectives

- To design a user-friendly web app for creating and managing resumes.
- To enable resume data storage using MySQL through a Spring Boot backend.
- To provide AI-based suggestions for improving resumes dynamically.
- To allow users to download their resumes easily as a text file.
- To implement a simple React frontend integrated with REST APIs.

Technologies Used

Layer	Technology
Frontend	React (Vite), JavaScript, HTML, CSS
Backend	Java Spring Boot, RESTful API
Database	MySQL
Tools	Eclipse IDE, Visual Studio Code
Version Control	GitHub

System Architecture

1. **Frontend (React):** Collects user details via a clean and simple UI.
2. **Backend (Spring Boot):** Handles data validation, storage, and provides APIs for saving and fetching resume details.
3. **Database (MySQL):** Stores all user resume information securely.
4. **AI Suggestion Engine:** Analyzes skills and gives text-based recommendations to enhance the resume content.

Features

- ✓ Create a new resume by entering personal details, skills, education, and experience.
- ✓ Save all data directly into a MySQL database.
- ✓ View all saved resumes instantly on the same page.
- ✓ AI-generated suggestions for improving skillsets.
- ✓ Download resumes as .txt files.
- ✓ Simple and interactive interface.

Modules Overview

Module	Description
Resume Form	Captures user details and sends them to the backend.
Backend Controller	Processes requests and saves data into MySQL.
AI Suggestion	Suggests skills or experience improvements dynamically.
Download Feature	Allows downloading resume as a text file.
View Resumes	Displays a list of all saved resumes.

project screenshots



Smart Resume Builder with AI Suggestions

Save Resume



Smart Resume Builder with AI Suggestions

Save Resume



Suggestion: Include Machine Learning or Django for Python-based roles!



All Saved Resumes

- **Kavya** (xyz@gmail.com)



7568745698



BE CSE



Fullstack developer



Devops



Download

-
- **xyz** (xz@gmail.com)



7436927656



BE CSE



Fullstack developer



java



Download

Results

The project successfully demonstrates the integration of frontend and backend technologies for a functional resume builder system.

The AI suggestions enhance user experience by guiding them toward more complete and job-ready resumes.

Future Enhancements

- Integration with real AI APIs for smarter suggestions.
- Option to export resumes as PDF files with templates.
- User authentication (login & signup).
- Advanced resume analytics.

Conclusion

The *Smart Resume Builder with AI Suggestions* is a practical and efficient web application that simplifies resume creation and improvement.

Through this project, I learned about full-stack web development, REST APIs, and integrating AI-driven logic into user-friendly applications.