Three-Wheeler

RESUME BUILDER
Software Requirements Specification

Version 1.0

Submitted in Partial Fulfillment for the Award of Degree of Bachelor of Technology in Information Technology from Rajasthan Technical University, Kota

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1.Introduction

1.1Purpose

The scope of a resume builder includes providing a range of tools for job seekers, students, and professionals to create polished resumes quickly. It offers customizable templates, content suggestions, and formatting assistance to help users tailor resumes for specific roles and industries. Many platforms include features like cover letter builders, LinkedIn integration, and ATS optimization to improve chances in the job market. Additionally, resume builders support multiple formats for easy submission and often offer premium features like advanced design options or real-time feedback. The scope also includes global accessibility, subscription models, and future integrations with AI-driven career tools

1.2 Scope

The scope of a resume builder lies in providing accessible, customizable tools for job seekers across various stages of their careers. It offers templates, formatting assistance, and content suggestions to create professional resumes. Features like ATS optimization, cover letter builders, and LinkedIn integration enhance its effectiveness. Resume builders cater to diverse users, including students, experienced professionals, and career changers, helping them tailor resumes for specific industries or roles. The platform supports multiple formats like PDF and Word, and premium options offer additional features. As technology advances, AI-powered tools and career development resources further expand its scope.

1.3 Definitions, Acronyms and Abbreviations

- **SRS**: Software Requirement Specification
- **API**: Application Programming Interface
- **UI**: User Interface
- **DBMS**: Database Management System
- **CRUD**: Create, Read, Update, Delete

1.4 References

- OpenAI GPT-3.5

- "Designing Web Interfaces" by Bill Scott and Theresa Neil

1.5 Technologies to be used

- **Front-end**: JavaScript, React.js
- **Back-end:** Node.js, Express.js
- **Database:** MongoDB

1.6 Overview

It includes HTML, CSS, and JavaScript files, with basic components such as an index page and a resume page. The project offers a foundational structure for a resume builder, likely focusing on layout and design. There is no detailed description provided, and the repository does not have a README or other documentation yet. It is in an early stage, with minimal commits and no releases or additional features at this point.

2. Literature survey

2.1 Review of Related Work

A review of related work for resume builders typically explores various existing tools and their features, such as templates, customization options, and integrations with job portals or LinkedIn. Some builders focus on design and formatting, while others emphasize content optimization for Applicant Tracking Systems (ATS). Research might also cover the usability and accessibility of these platforms, their AI-driven features for suggestions, and how they cater to different user needs, such as for students, career changers, or experienced professionals.
For example:-

- Resume-Now
- MyPerfectResume
- LiveCarrier

2.2 Knowledge gaps

Knowledge gaps in resume builders include the lack of deep industry-specific personalization, advanced AI-powered suggestions, and the ability to fully represent soft skills like leadership or teamwork. While some tools optimize for technical skills, they often overlook how to display personal attributes effectively. Additionally, limited integration with job portals and career websites can hinder seamless application submissions. These gaps highlight the need for further innovation to enhance customization, content optimization, and broader platform integration to better meet the needs of diverse job seekers.

2.3 Comparative Analysis

A **comparative analysis of resume builders** examines the strengths and weaknesses of different tools based on features like templates, customization options, AI integration, ATS optimization, and ease of use. Key platforms to compare include **Canva**, **Zety**, and **Novoresume**, which vary in design flexibility, user interface, and additional services like cover letter creation or LinkedIn integration. While some focus on professional design, others prioritize content optimization for job applications. Differences in pricing models, format export options, and free vs. premium features further differentiate these platforms in meeting diverse user needs.

2.4 Summary

A resume builder is an online tool that simplifies creating professional resumes by providing templates, customization options, and formatting assistance. It typically helps users highlight their skills, experience, and qualifications in a clean, readable format. Advanced features may include keyword optimization for ATS, cover letter creation, and integration with LinkedIn. These platforms cater to various users, such as job seekers, students, and career changers, enabling them to craft resumes quickly and efficiently.

3. Specific Requirements

3.1 Functional Requirement

- **User Account Management**: Allow users to create, save, edit, and delete resumes.
- **Template Selection**: Offer various resume templates for different industries and styles.
- **Content Input Fields**: Provide sections for personal details, education, experience, skills, and more.
- **Customization Options**: Allow users to adjust fonts, colors, and layout.
- **ATS Optimization**: Include keyword suggestions to improve compatibility with Applicant Tracking Systems.
- **Export Options**: Enable downloading resumes in multiple formats (e.g., PDF, Word).
- **Preview Function**: Allow users to preview the resume before finalizing.

3.2 Non Functional Requirements

- **Performance**: Ensure fast response times, especially when generating or previewing resumes.
- **Scalability**: Handle increasing numbers of users without performance degradation.
- **Availability**: Ensure high uptime, with minimal downtime for maintenance or updates.
- **Security**: Protect user data, especially personal information and resumes, with encryption and secure login mechanisms.
- **Usability**: Offer an intuitive, user-friendly interface with minimal learning curve.
- **Compatibility**: Ensure compatibility across different devices, browsers, and operating systems.

3.3 Hardware Requirements

- **Processor**: A modern CPU (Intel i3 or equivalent) is typically sufficient.
- **RAM**: At least 4GB of RAM for smooth performance.
- **Storage**: Minimal storage is needed, as resumes are saved in the cloud.
- **Display**: A screen with a resolution of 1024x768 or higher for optimal user experience.
- **Internet**: A stable internet connection for accessing and using the web-based tool.

  These requirements ensure the resume builder runs smoothly on most devices.

3.4 Software Requirements

- **Web Browser**: Support for modern browsers (Chrome, Firefox, Safari, Edge).
- **Web Technologies**: HTML5, CSS3, JavaScript for frontend development; backend frameworks like Node.js, Python, or PHP may be used.

- **Database**: A relational or NoSQL database (e.g., MySQL, MongoDB) for storing user data.
- **Server**: A web server (e.g., Apache, Nginx) to host the application.
- **Cloud Storage**: For storing resumes and user data securely.
- **Security Software**: SSL/TLS for data encryption and protection.

3.5 Agile Methodology

Agile methodology for a resume builder focuses on iterative development, flexibility, and collaboration. It involves breaking the project into small, manageable tasks (sprints), delivering working features at the end of each sprint, and regularly gathering user feedback for improvements. Key elements include constant communication among stakeholders, continuous testing, and the ability to adapt to changing requirements. Agile promotes incremental enhancements, ensuring the final product evolves based on real user needs and feedback, resulting in a more responsive and user-friendly resume builder.

3.5.1 Identify the Purpose

The purpose of a resume builder is to simplify and streamline the process of creating professional resumes. It helps users present their skills, experience, and qualifications in an organized and visually appealing format. Resume builders often cater to diverse needs by providing customizable templates, guidance for content creation, and features like ATS optimization and integration with job platforms. They aim to save time, improve job application success rates, and empower users with tools to create tailored resumes that meet industry and recruiter standards.

3.5.2 User-Centric Design

User-centric design in a resume builder ensures simplicity, accessibility, and personalization. It features intuitive navigation, customizable templates, real-time content feedback, and device compatibility. Regular updates based on user feedback improve usability, empowering diverse users to create professional resumes efficiently and effectively.

3.5.3 Flexibility

The flexibility of a resume builder lies in its ability to cater to diverse user needs. It offers customizable templates, editable sections, and adjustable formatting for tailored resumes. Users can modify layouts, fonts, and colors while adapting content to specific industries or roles. Flexibility ensures a user-friendly and adaptable experience.

3.5.4 Collaboration

Collaboration in a resume builder involves enabling seamless teamwork among users, developers, and stakeholders. Features like shared access for review, feedback, and edits facilitate group input for collaborative resume creation. Developers integrate user feedback into iterative updates, while stakeholders ensure the builder aligns with industry needs, improving its usability and relevance.

3.5.5 Frequent Testing

Frequent testing in a resume builder ensures that all features, from template selection to exporting, function seamlessly across devices and browsers. It involves iterative testing during development to identify and fix issues early. Testing includes usability checks, stress testing for scalability, and compatibility testing to ensure smooth performance.

3.5.6 Prioritized Backlog

A **prioritized backlog** in a resume builder organizes development tasks based on importance and user needs. Core features like template selection, content customization, and ATS optimization are prioritized first to ensure usability. Enhancements like advanced AI suggestions or integration with job portals are added later, based on user feedback and project goals.

3.6 Business Process Model

- Business Process Model of a Resume Builder

The Business Process Model (BPM) for a resume builder outlines how users interact with the system and how it processes their input to deliver the desired output. Below is a detailed

explanation of its key stages:

- 1. User Interaction Phase
- Registration/Login: Users create an account or log in to access personalized features.
- Input Data: Users provide personal details (name, contact), education, work experience, skills, and other relevant information.
- Select Template: Users browse and choose from available templates suited to their industry or style preferences.

- 2. Data Processing Phase
- Template Integration: The system organizes user-provided content into pre-designed templates for consistent formatting.
- ATS Optimization: Keywords are analyzed and suggestions are provided to align the resume with Applicant Tracking System (ATS) requirements.
- Error Checking: The system checks for spelling, grammatical issues, and formatting inconsistencies.

- 3. Customization Phase
- Users can adjust layout, font, color, and section order.
- Real-time previews display changes, ensuring satisfaction before finalizing.

- 4. Output Generation Phase
- Export Options: Resumes are downloadable in multiple formats like PDF, Word, or plain text.
- Direct Sharing: Some systems enable users to share resumes via email or LinkedIn directly from the platform.

- 5. Feedback and Iteration
- Users provide feedback on their experience and features.
- Developers collect feedback for enhancements, like adding templates or integrating new technologies (e.g., AI suggestions).

This process ensures the resume builder is user-friendly, efficient, and continuously evolving to meet market demands.

3.7 Supplementary Requirements

Supplementary requirements of a resume builder address non-functional aspects that enhance its usability and reliability. These include:

- **Performance**: Ensure the system loads quickly and processes user inputs efficiently.
- **Scalability**: Handle increasing users and data without performance degradation.
- **Security**: Protect user data with encryption, secure logins, and adherence to data

privacy regulations.

- **Accessibility**: Make the platform usable for people with disabilities by following accessibility standards.
- **Cross-Platform Compatibility**: Ensure smooth functionality across browsers, operating systems, and devices.
- **Localization**: Support multiple languages for global usability.

These ensure a seamless and reliable user experience.

4. System Architecture

4.1 Client-Server Architecture

The client-server architecture of a resume builder involves a **client side** (frontend) that manages user interactions, such as template selection and data input, using technologies like HTML, CSS, or JavaScript. The **server side** (backend) processes inputs, generates resumes, stores data in databases (e.g., MySQL), and communicates securely via HTTP/HTTPS.

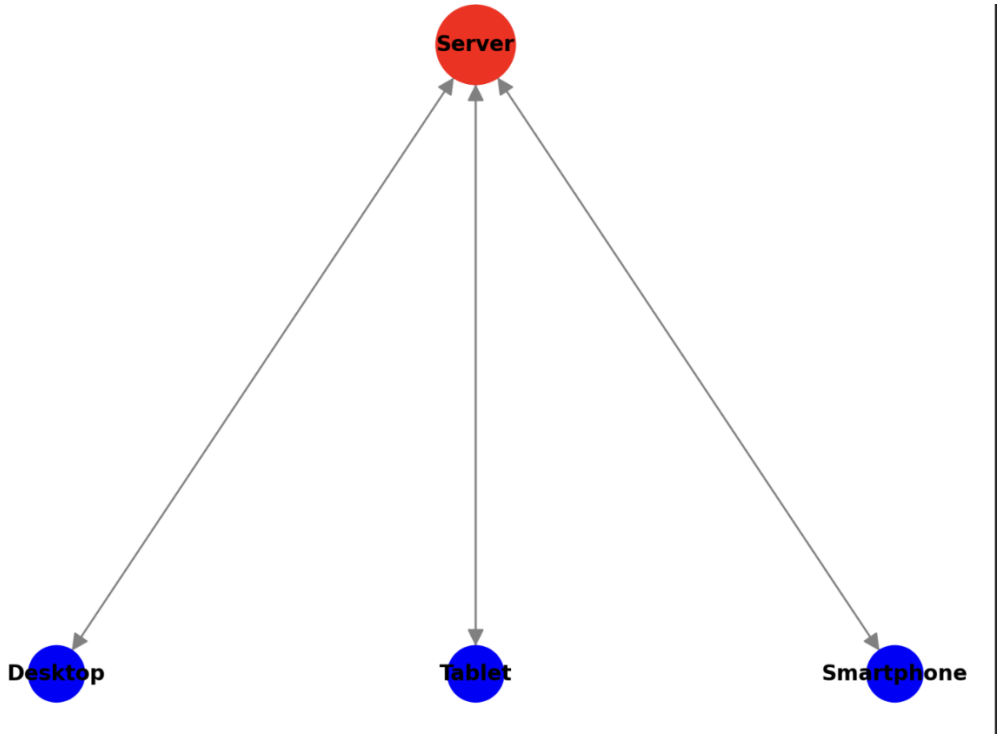


Figure 4.1: Client-Server Architecture

In the **client-server architecture** of a resume builder, the system is divided into two main components:

1. Client Side (Frontend)

- **Responsibilities**: Handles user interactions, input collection, and displaying templates.
- **Technologies**: HTML, CSS, JavaScript, or frameworks like React or Angular.
- **Functionality**: Sends user data and requests to the server, receives responses (e.g., processed resume data or preview).

2. Server Side (Backend)

- **Responsibilities**: Processes data, manages templates, optimizes resumes for ATS, and handles business logic.
- **Technologies**: Node.js, Python, PHP, or similar backend frameworks.
- **Database**: Stores user data, templates, and logs, using databases like MySQL or MongoDB.
- **API Integration**: Provides endpoints for resume data processing and integrations (e.g., LinkedIn).

The **communication** between client and server occurs over HTTP/HTTPS protocols, ensuring data transfer is secure and efficient.

- **APIs (Application Programming Interfaces)**: APIs in a resume builder facilitate core operations like user management, data handling, and template retrieval. They manage login, input storage, resume generation, and export in formats like PDF. Additionally, APIs enable ATS optimization, third-party integrations (e.g., LinkedIn), and efficient communication between the frontend and backend components.

5. Overall Description

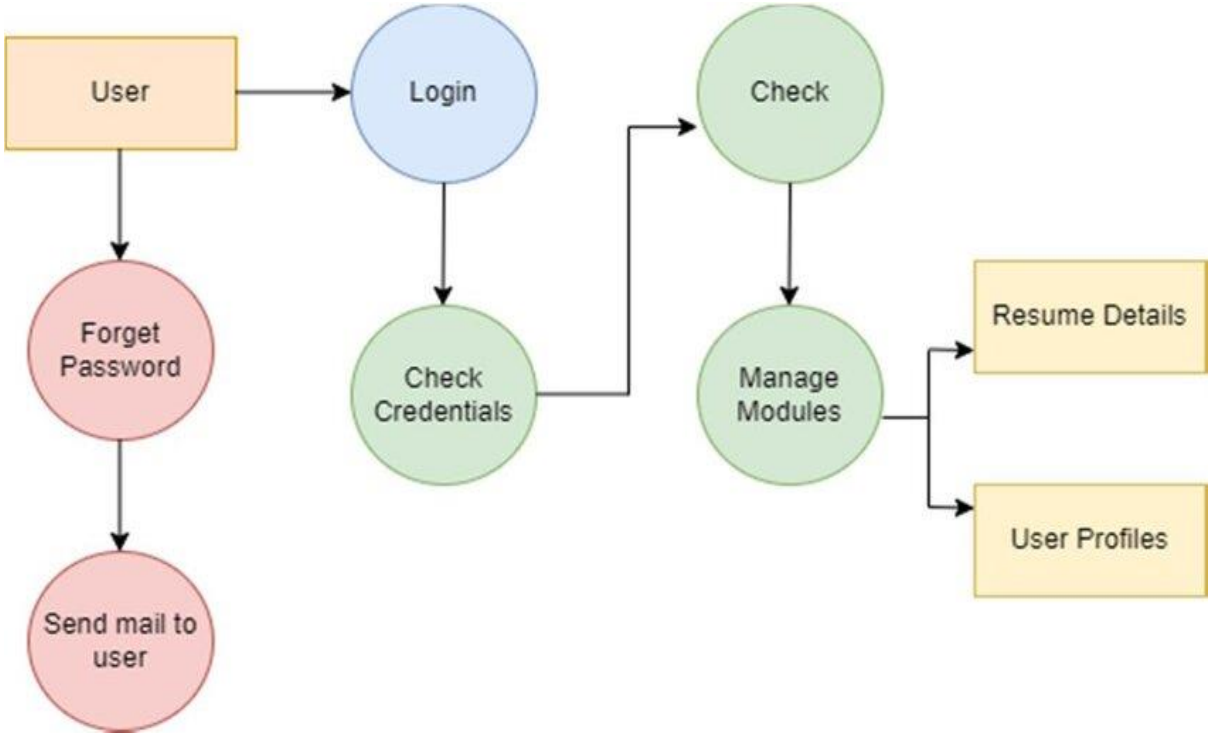
5.1 Product feature

Here’s a detailed explanation of each **resume builder product feature**:

1. **Customizable Templates**
   Professionally designed templates with options to adjust layout, font, and colors, allowing users to create resumes tailored to specific industries or job roles.
2. **User-Friendly Interface**
   Intuitive navigation, drag-and-drop features, and simple instructions ensure a seamless experience for users with varying technical skills.
3. **ATS Optimization**
   Ensures resumes meet Applicant Tracking System requirements by suggesting keywords and proper formatting for improved job application success.
4. **Real-Time Previews**
   Displays live updates as users edit their resumes, enabling them to make changes and visualize the final result instantly.
5. **Multiple Export Options**
   Allows downloading resumes in various formats like PDF, Word, or plain text, ensuring compatibility with different job platforms.
6. **Content Suggestions**
   Provides recommendations for describing skills, achievements, and experience to enhance resume content quality and clarity.
7. **Cover Letter Integration**
   Offers tools to create matching cover letters with consistent formatting and style to complement resumes.
8. **Cloud Storage**
   Enables users to save resumes securely, access them across devices, and update them as needed.

5.2 Data Flow diagram

The data flow diagram (DFD) will visually represent how data moves through the School Admin System, illustrating the flow from user input to data processing and eventual storage. It will highlight the key processes involved, such as user registration, attendance tracking, and academic performance management, as well as the interactions between different components, enabling stakeholders to understand how data is managed throughout the system.



5.2.1 **Zero level DFD**

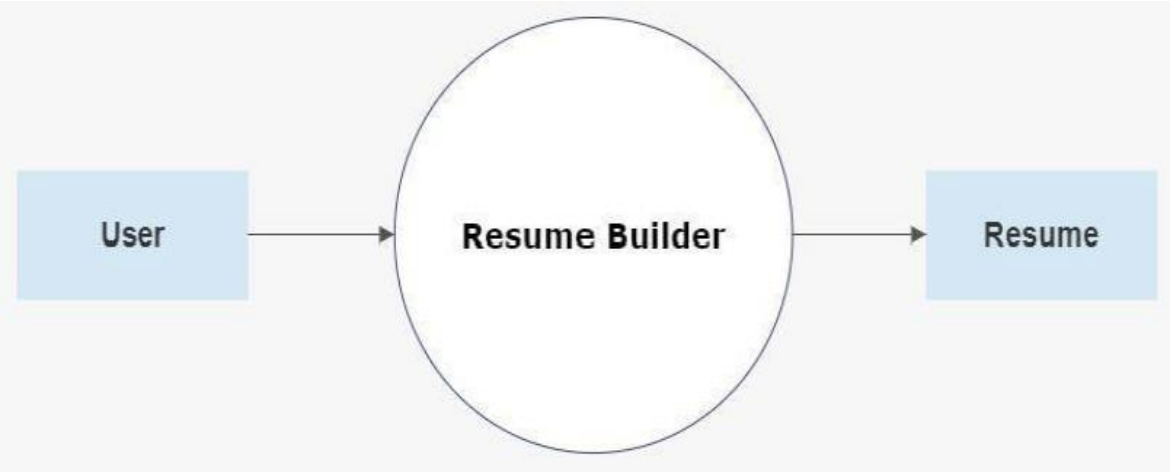


Figure 5.1: Zero Level DFD

5.2.2 First Level DFD

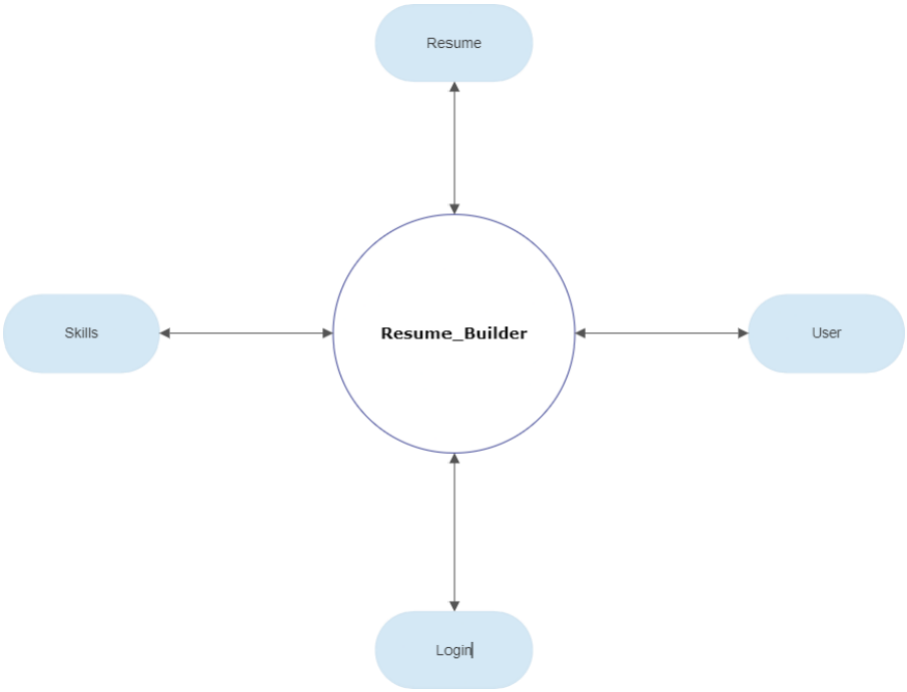


Figure 5.2: First Level DFD

5.2.3 Second Level DFD

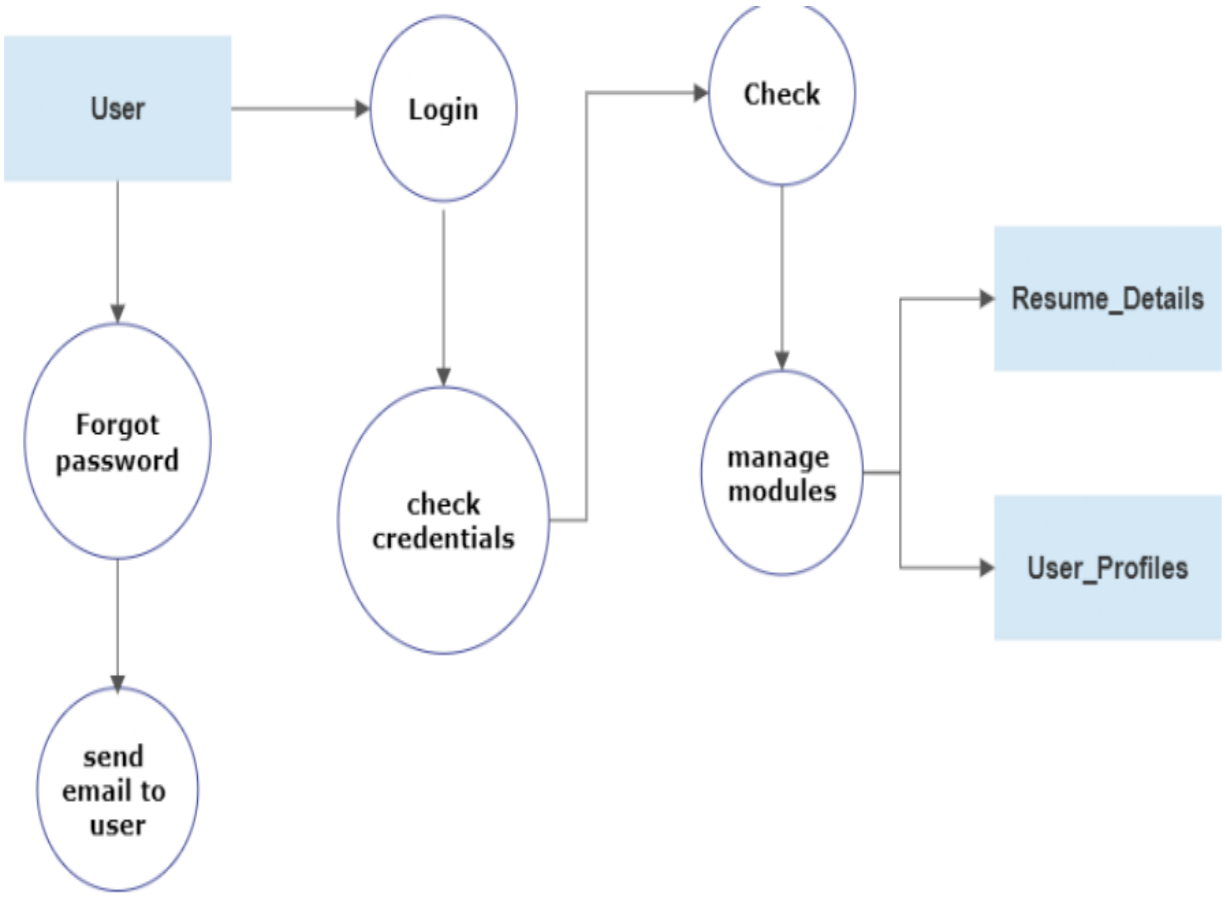


Figure 5.3: Second Level DFD

5.3 E-R Diagram

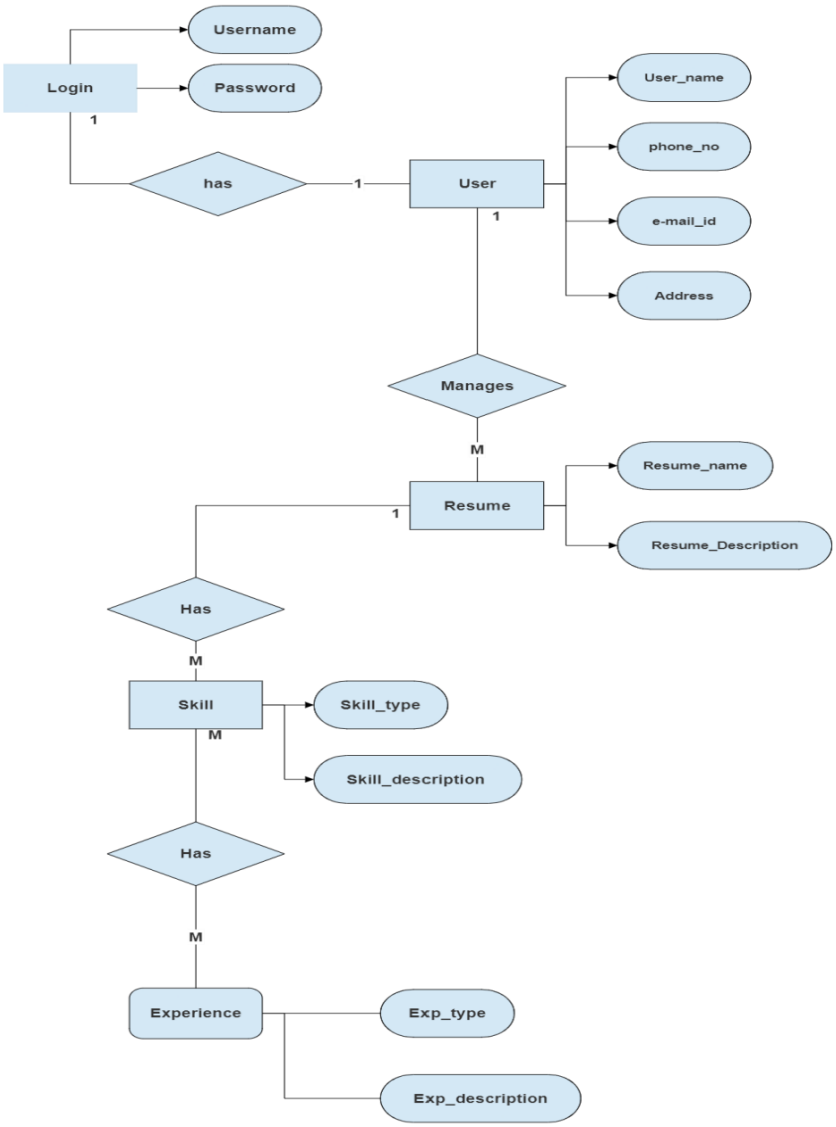


Figure 5.4: ER Diagram

5.4 Class Diagram

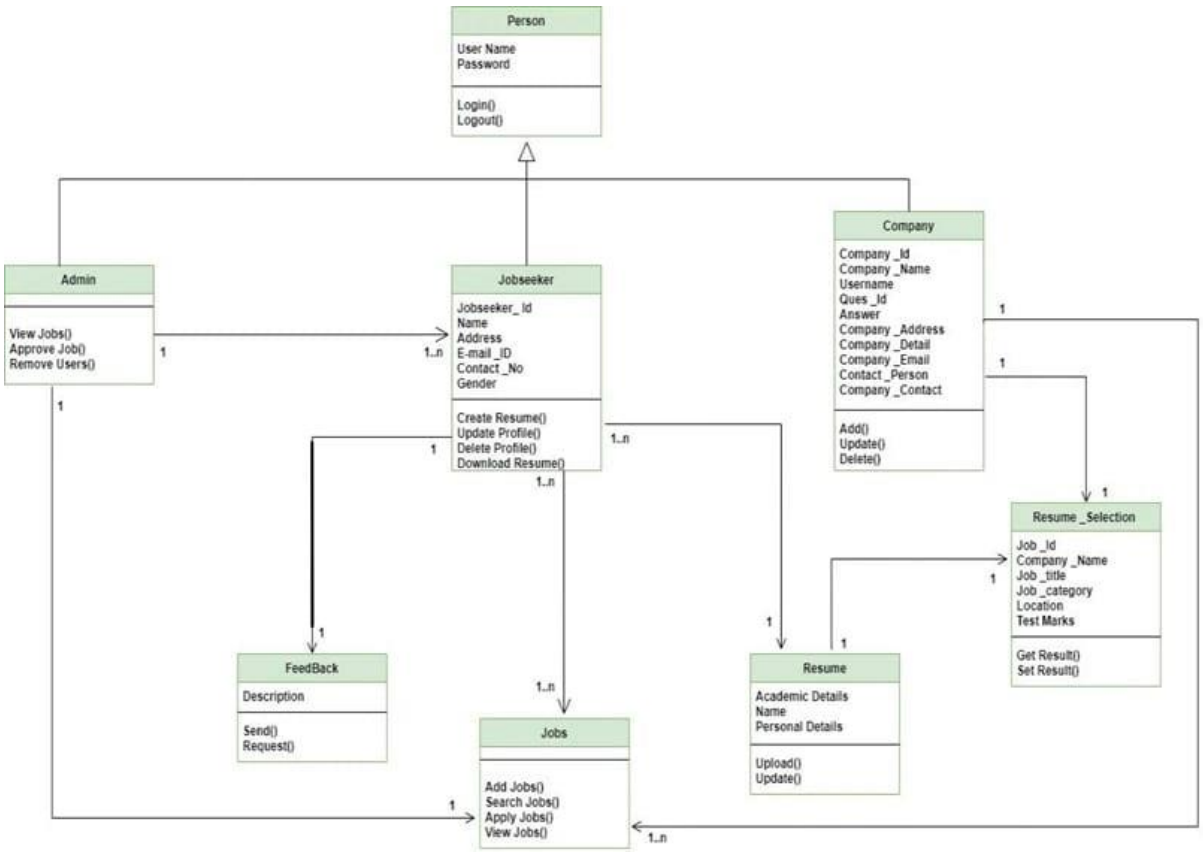


Figure 5.5: Class Diagram

5.5 Use-Case Model

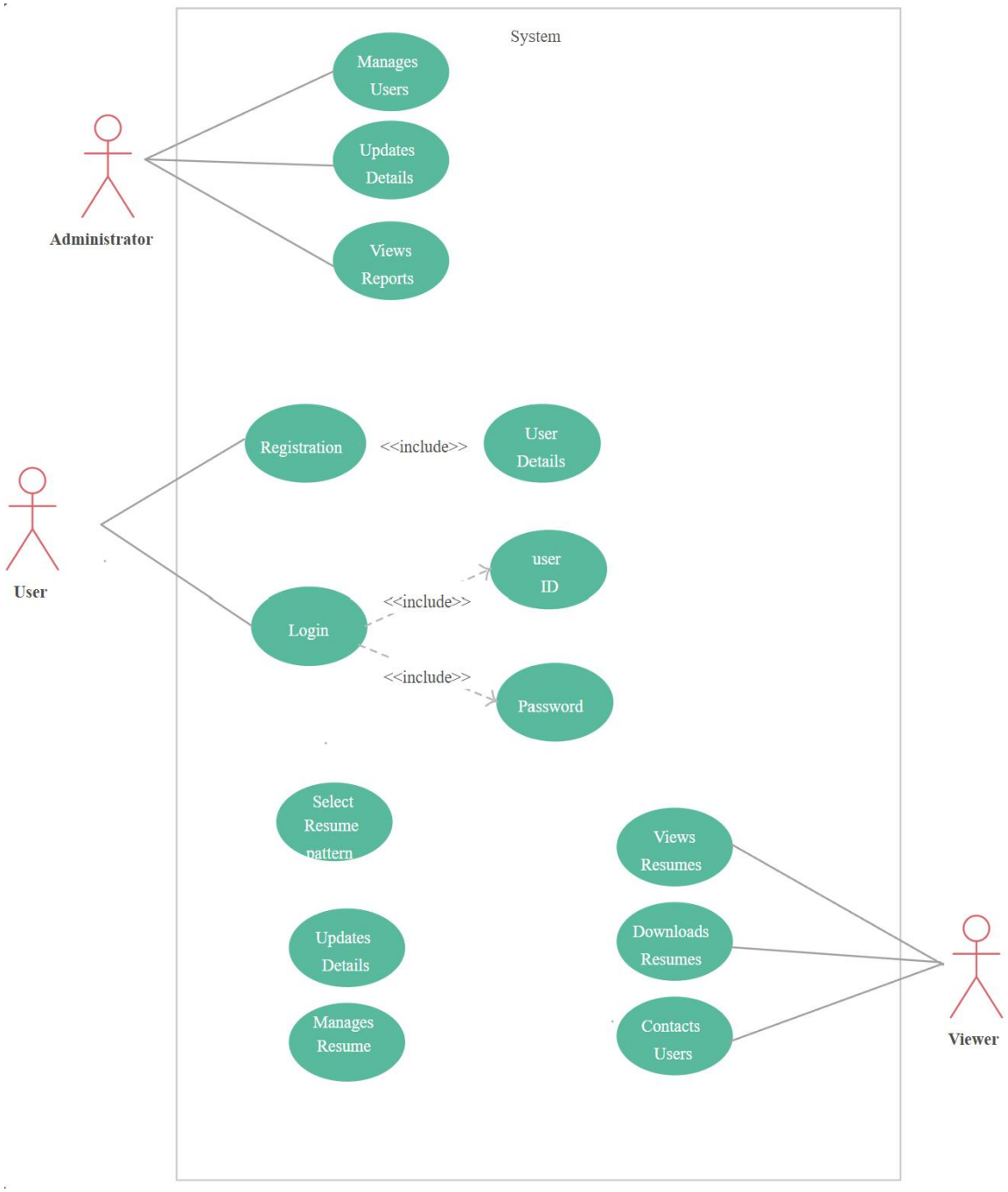


Figure 5.6: Use Case Diagram

5.6 Behaviors Diagrams

5.6.1 Sequence Diagram

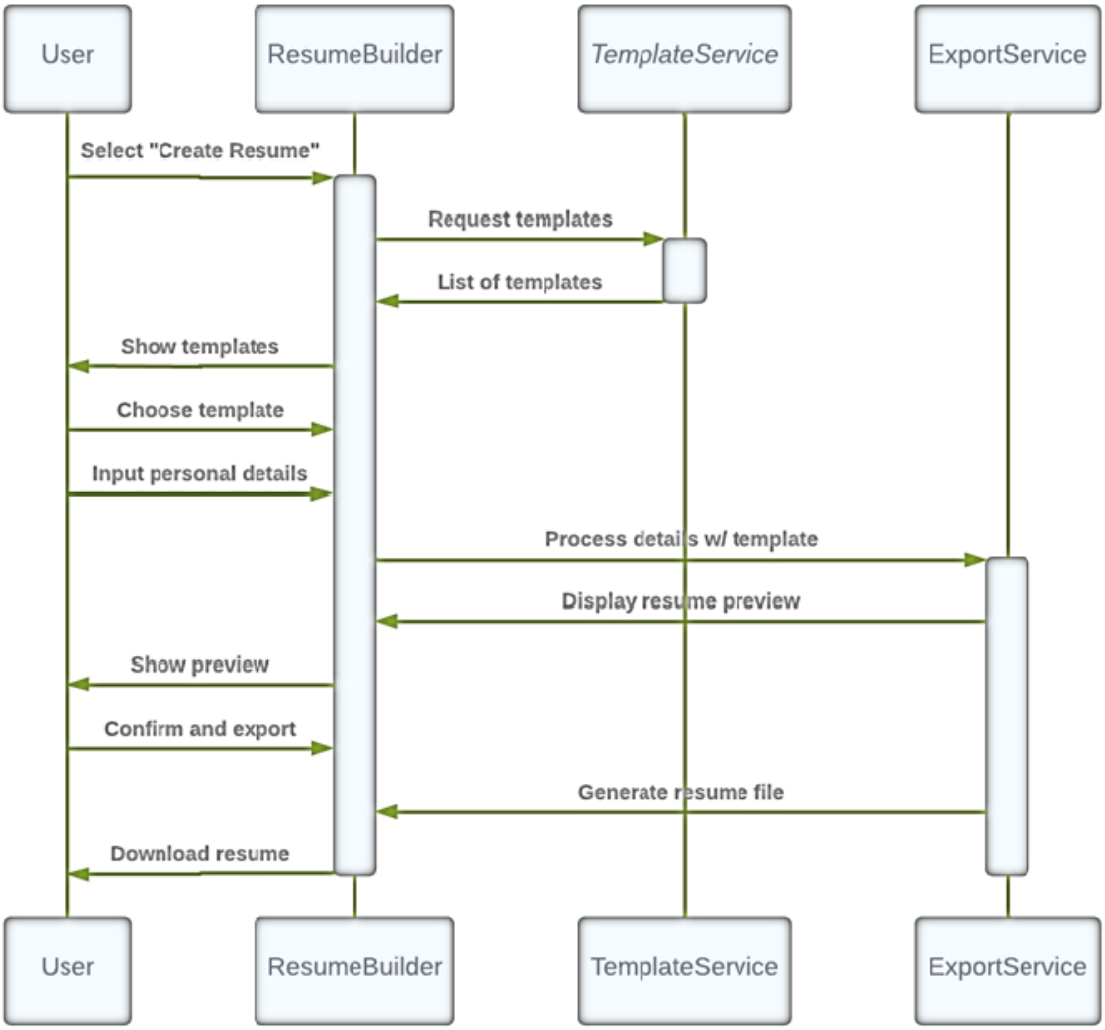


Figure 5.7: Sequence Diagram

5.6.2 Activity Diagram

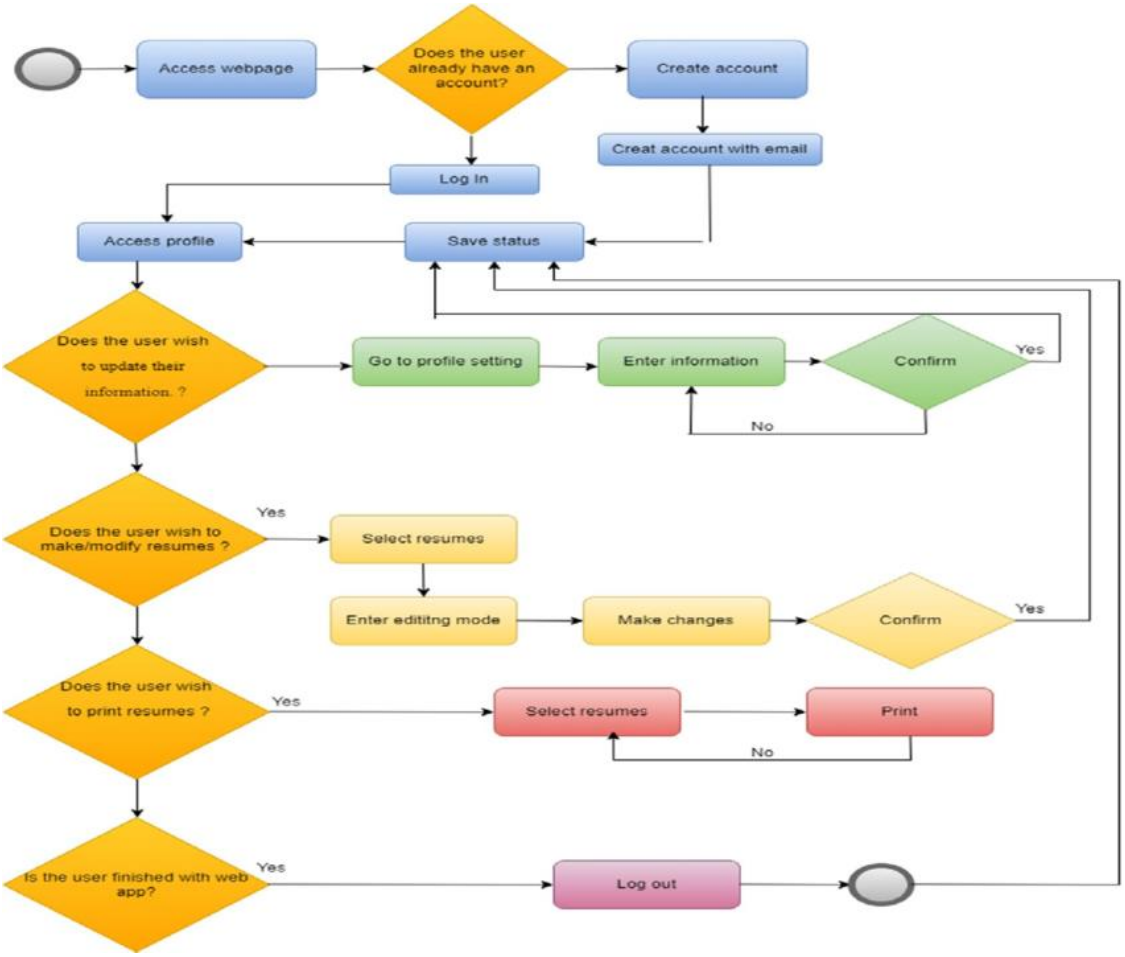


Figure 5.8: min Activity Diagram

5.7 Assumptions and Dependencies

5.7.1 Assumptions:

- **User Familiarity**: Users are assumed to have basic knowledge of their personal information, job history, and skills.

- **Internet Access**: The system assumes users have a stable internet connection for accessing and saving data.
- **Cloud Storage**: Assumes cloud storage is reliable for saving and retrieving user data.
- **Template Availability**: Assumes a diverse set of templates and customization options are available to suit various industries.
- **ATS Optimization**: Assumes that users want their resumes to be optimized for Applicant Tracking Systems.
- **Security Compliance**: Assumes the platform adheres to data privacy and security regulations to protect sensitive user data.

5.7.2 Dependencies:

Dependencies of a resume builder system include:

- **Frontend Frameworks**: Libraries like React, Angular, or Vue.js for building interactive user interfaces.
- **Backend Services**: Server-side technologies like Node.js, Python (Django/Flask), or PHP for handling data processing.
- **Database**: MySQL, MongoDB, or PostgreSQL for storing user profiles, resumes, and templates.
  Cloud Storage: Services like AWS or Google Cloud for saving resumes and data securely.
- **Authentication**: OAuth, JWT, or Firebase for user authentication and security.
- **External APIs**: For job portal integration or LinkedIn data fetching.

6. Supporting Information

6.1 List of Figures

7. Conclusion & Future Scope

7.1 Conclusion

resume builder is an essential tool that simplifies the resume creation process, offering users professional templates, customization options, and ATS optimization. It enhances job application success by helping users present their qualifications effectively.

7.2 Future Scope

The **future scope of resume builders** lies in incorporating advanced technologies and expanding their capabilities. AI-driven tools will offer smarter content suggestions, detect skill gaps, and optimize resumes based on specific job market trends. Enhanced personalization, including tailored templates for global markets and various industries, will be key. Integrating resume builders with job portals will streamline the application process, allowing users to directly submit resumes. Mobile-optimized platforms will enable users to work on their resumes on-the-go, while dynamic resumes with multimedia elements like videos will help candidates stand out. Additionally, enhanced analytics and career insights will empower users with data-driven decisions about their job applications. Enhanced data security and compliance with privacy regulations will be prioritized to protect sensitive user information. These advancements will make resume builders even more efficient, personalized, and accessible to a global audience.

8. Concerns / Queries / Doubts if any

Here are potential concerns, queries, or doubts regarding a resume builder:

- **Data Security**: How is user data protected, especially sensitive information?
- **ATS Compatibility**: Does the tool guarantee resumes will pass Applicant Tracking Systems?
- **Customization Limitations**: Can users fully personalize templates beyond preset options?
- **Export Quality**: Are exported resumes visually consistent across formats like PDF and Word?
- **Scalability**: Can the system handle large numbers of users simultaneously?
- **Access and Usability**: Is it accessible on all devices and user-friendly for non-technical users?