A book with a blue and green design

AI-generated content may be incorrect.

Table of Contents

Work Breakdown Structure………………………………………………………..3

Gantt & Network Diagram………………………………………………………..4

Detailed Requirements…………………………………………………………….5-6

Fully Dresses Use Cases…………………………………………………………..7-9

Use Case Diagram………………………………………………………………….10

Research On Other Systems…………………………………………………………11

API Descriptions…………………………………………………………………….12

**Work Breakdown Structure**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task ID** | **Task Name** | **Duration (hrs)** | **Start Date** | **Finish Date** |
| 1 | **Project Initiation** | 48 | 1/6/2025 | 1/17/2025 |
| 1.1 | Define project scope | 16 | 1/6/2025 | 1/8/2025 |
| 1.2 | Identify stakeholders | 16 | 1/9/2025 | 1/13/2025 |
| 1.3 | Conduct market research | 16 | 1/14/2025 | 1/17/2025 |
| 2 | **Planning Phase** | 64 | 1/20/2025 | 2/7/2025 |
| 2.1 | Develop project plan | 24 | 1/20/2025 | 1/24/2025 |
| 2.2 | Define functional & technical requirements | 24 | 1/27/2025 | 1/31/2025 |
| 2.3 | Risk assessment and mitigation plan | 16 | 2/3/2025 | 2/7/2025 |
| 3 | **Design Phase** | 96 | 2/10/2025 | 3/7/2025 |
| 3.1 | UI/UX Wireframing & Prototyping | 48 | 2/10/2025 | 2/21/2025 |
| 3.2 | AI Algorithm & Data Architecture Design | 48 | 2/24/2025 | 3/7/2025 |
| 4 | **Development Phase** | 256 | 3/10/2025 | 4/18/2025 |
| 4.1 | Frontend Development | 96 | 3/10/2025 | 3/28/2025 |
| 4.2 | Backend Development | 96 | 3/31/2025 | 4/11/2025 |
| 4.3 | AI & Machine Learning Integration | 64 | 4/14/2025 | 4/18/2025 |
| 5 | **Testing Phase** | 96 | 4/21/2025 | 5/2/2025 |
| 5.1 | Unit Testing | 32 | 4/21/2025 | 4/24/2025 |
| 5.2 | Integration Testing | 32 | 4/25/2025 | 4/29/2025 |
| 5.3 | System Testing | 16 | 4/30/2025 | 5/1/2025 |
| 5.4 | User Acceptance Testing (UAT) | 16 | 5/2/2025 | 5/2/2025 |
| 6 | **Deployment Phase** | 32 | 5/5/2025 | 5/6/2025 |
| 6.1 | Prepare deployment plan | 16 | 5/5/2025 | 5/5/2025 |
| 6.2 | Deploy Jobsync to production | 16 | 5/6/2025 | 5/6/2025 |
| 7 | **Post-Launch Monitoring & Updates** | 40 | 5/7/2025 | 5/9/2025 |
| 7.1 | Monitor system performance | 16 | 5/7/2025 | 5/7/2025 |
| 7.2 | Collect user feedback | 16 | 5/8/2025 | 5/8/2025 |
| 7.3 | Release minor bug fixes | 8 | 5/9/2025 | 5/9/2025 |
| 8 | **Project Closure** | 16 | 5/9/2025 | 5/9/2025 |
| 8.1 | Final project review | 8 | 5/9/2025 | 5/9/2025 |
| 8.2 | Document lessons learned | 8 | 5/9/2025 | 5/9/2025 |

**Gantt & Network Diagram**

A screenshot of a computer

AI-generated content may be incorrect.

**Detailed Requirements**

### **Functional Requirements for JobSync:**

1. **Job Search and Application**  
   1.1 The system will allow users to search for job opportunities by title, industry, location, and company.  
   1.2 The system will allow users to filter search results based on job type, experience level, and salary range.  
   1.3 The system will enable users to apply for jobs directly through the platform.  
   1.4 The system will provide users with direct access to HR managers of the companies they apply to.
2. **Company Information**  
   2.1 The system will display detailed information about the companies users are applying to, including company culture, mission, and recent news.  
   2.2 The system will provide insights into company-specific hiring trends and feedback from other applicants.
3. **Resume and Interview Preparation**  
   3.1 The system will offer resume review and optimization suggestions to improve user applications.  
   3.2 The system will provide personalized feedback on resumes based on industry standards.  
   3.3 The system will generate potential interview questions based on the job description and user resume.  
   3.4 The system will allow users to simulate mock interviews with AI-based feedback.
4. **User Profile and Customization**  
   4.1 The system will enable users to create a profile containing their resume, cover letter templates, and professional details.  
   4.2 The system will allow users to save job searches and receive alerts for new openings matching their preferences.  
   4.3 The system will recommend jobs to users based on their application history and preferences.
5. **Networking and Follow-Up**  
   5.1 The system will facilitate professional networking by suggesting HR contacts and LinkedIn connections.  
   5.2 The system will provide templates for follow-up emails post-interview or application submission.

### **Nonfunctional Requirements for JobSync:**

1. **Operational**  
   1.1 The system will support major web browsers and mobile applications.  
   1.2 The system will enable seamless synchronization across devices.  
   1.3 The system will provide 24/7 access with minimal downtime.
2. **Performance**  
   2.1 The system will handle simultaneous job searches and applications without lag.  
   2.2 Response times for job searches and profile updates will be kept under two seconds.
3. **Security**  
   3.1 User data, including resumes and personal information, will be encrypted and securely stored.  
   3.2 All communication with HR managers will be conducted through a secure channel.  
   3.3 The system will comply with data protection regulations such as GDPR and CCPA.
4. **Cultural and Political**  
   4.1 The system will accommodate diverse user needs and support inclusive job postings.  
   4.2 No specific political or cultural biases will be integrated into job recommendations or feedback.

**Fully Dresses Use Cases**

**Use Case 1: User Applies for a Job**

* **Use Case Name**: Apply for a Job
* **Participant :** Applicant
* **Description**: A user searches for a job, selects one, and submits an application.
* **Preconditions**:
  + The user must have an account.
  + The user must have a resume uploaded.
* **Main Flow**:
  + User logs into the JobSync app.
  + User searches for job postings.
  + User selects a job posting.
  + User clicks "Apply."
  + System verifies if the user has a resume uploaded.
  + System submits the application.
  + System confirms the submission to the user.
* **Alternate Flow**:
  + If the user does not have a resume uploaded, the system prompts them to upload one before applying.
* **Postconditions**:
  + The job application is stored in the system and visible under "My Applications.

**Use Case 2: Employer Posts a Job**

* **Use Case Name**: Post a Job
* **Participant**: Employer
* **Description**: An employer posts a job opening for applicants to apply.
* **Preconditions**:
  + Employer must have an account.
* **Main Flow**:
  + Employer logs into JobSync.
  + Employer navigates to the "Post a Job" section.
  + Employer fills out job details (title, description, requirements, salary, location).
  + Employer submits the job posting.
  + System verifies the job details.
  + System publishes the job posting.
  + System confirms the posting to the employer.
* **Alternate Flow**:
  + If required fields are missing, the system prompts the employer to complete them before submission.
* **Postconditions**:
  + The job posting is live and available for applicants to view.

**Use Case 3: AI Resume Analysis**

* **Use Case Name**: AI Resume Analysis
* **Participant**: Applicant
* **Description**: The system analyzes a user’s resume and provides feedback for improvements.
* **Preconditions**:
  + The user must have an account.
  + The user must upload a resume.
* **Main Flow**:
  + User uploads a resume.
  + System scans the resume using AI.
  + System evaluates keywords, formatting, and content.
  + System generates a report with feedback.
  + System presents the report to the user.
* **Alternate Flow**:
  + If the file format is incorrect, the system prompts the user to upload a supported format, for example a pdf
* **Postconditions**:
  + The user receives feedback and can edit their resume accordingly.

**Use Case Diagram**

A diagram of a system

AI-generated content may be incorrect.

**Research On Other Systems**

A breakdown of similar systems to Job Sync that utilize comparable functionalities, focusing on their design and capabilities:

LinkedIn allows users to search for job openings by title, company, and location, with advanced filtering options for job type, experience level, and more. Users can apply directly through the platform using the "Easy Apply" feature. The platform emphasizes professional networking, enabling users to connect with HR managers, recruiters, and company employees. LinkedIn also offers resume-building suggestions and insights into how users can tailor their profiles to be more appealing to recruiters. Premium members get access to interview question tips and role-specific prep courses. Additionally, company pages on LinkedIn provide detailed information about the organization, its culture, employee testimonials, and recent updates.

Glassdoor offers job listings searchable by title, company, and location. Users can apply through the site if the employer has enabled direct applications. The platform specializes in company reviews and ratings submitted by employees, providing insight into the workplace environment, salary ranges, and interview processes. Glassdoor also aggregates common interview questions asked by specific companies, allowing users to prepare based on previous candidate experiences. Furthermore, users can set up personalized job alerts and receive recommendations based on their search history and profile.

**API Descriptions**

|  |  |  |  |
| --- | --- | --- | --- |
| **API Name** | **Purpose** | **Why Needed** | **Example** |
| Google Maps | Location Services | Helps filter jobs by location | Jobs that are nearby within (5-10 miles) |
| LinkedIn | Job Listings | Get external job posts | External job feed |
| Twilio | Notifications | Sends SMS updates on application status | “Your application has been viewed” |
| Resume Parsing | Resume Analysis | Extract structured data from resumes | Skills extraction for keyword matching |
| OpenAI | Interview Prep | Generate interview type questions | Based on job description |