Job Nexus

Software Requirements Specifications (SRS)

Version <1.0>

02/28/2025

Release Checklist

|  |  |
| --- | --- |
| **Checklist Item** | **Control (Yes/No)** |
| The document has passed the quality assurance process. | YES / NO |
| The document is visually appealing and has a professional look and structure. | YES / NO |
| All placeholders such as text within <> are replaced with appropriate text. | YES / NO |
| The document is prepared in the “Justify Text” format. | YES / NO |
| The document does not include typos, different fonts, and misalignments. | YES / NO |
| In the revision history, the first version states “The first version”. Additional versions include an entry highlighting all the changes from the previous version. | YES / NO |
| The table of contents (TOC) is updated as necessary. | YES / NO |
| References list other project documents and additional standards or documents needed to understand the document. The references include the necessary document/artifact version number and publication date. | YES / NO |
| The language grammar is used appropriately. | YES / NO |
| Sentences are written as full sentences. | YES / NO |
| The wording in the document is formal. | YES / NO |
| The wording in the document is clear. | YES / NO |
| The wording in the document is professional. | YES / NO |
| All project-related definitions, acronyms, and abbreviations sections are included in the related tables. | YES / NO |
| The team member names are specifically spelled out in the document preparation and approvals sections. | YES / NO |
| The purpose and scope of the document are adequately described. | YES / NO |
| All sections include the necessary and adequate information. | YES / NO |
| The requirements are written in full sentences. | YES / NO |
| The requirements are atomic, clear, unambiguous, feasible, and testable. |  |
| The requirements start with “The system shall…”. | YES / NO |
| The total number of “Frequency of Use” in the use cases add up to 100%. | YES / NO |
| Each action in the use cases has a separate sequence number. | YES / NO |
| The number of requirements is adequate to specify the details of all the features of the product. | YES / NO |
| The requirements traceability matrix is complete. | YES / NO |
| Each use case listed in the use case table is detailed with the use case template. | YES / NO |
| All fields in the use cases are complete. | YES / NO |
| In the use cases, the user actions start with “The user …” and the system actions start with “The system …”. | YES / NO |
| In the use cases, the steps in each alternative scenario include the same id structure such as 2.a., 3.a., 4.a., etc. | YES / NO |
| All requirements have correct ID numbers. | YES / NO |
| The use case names start with a verb followed by a noun. | YES / NO |
| All use case actions have a sequence number, and all action sequence numbers are unique. | YES / NO |
| The use case scenarios include an adequate number of actions to describe the scenario. | YES / NO |
| The use case covers all the necessary feature-related scenarios. | YES / NO |

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| **Final Control** | **Yes/No** |
| The document is checked based on the “Team Project Artifacts Common Errors” Guideline. The document is ready for release. | YES / NO |
| The document is not ready for release. | YES / NO |

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 02/28/2025 | 1.0 | Initial Draft | Bhavani Sathi, Mohammed Ali Sheriff Shaik, Pranav Pratheek Malleboyina, Sumana Sree |
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Software Requirements Specification (SRS)

# Introduction

This document contains the entire explanation of the project including the requirements, project flow and the list of all documents required for the project.

## Purpose of the Document

The purpose of this document is to collect, analyze, and define high-level needs and features of the Job Nexus Application. It focuses on the capabilities needed by the job recruiters and the target users (job seekers), and why these needs exist. The details of how the Job Nexus fulfills these needs are detailed in the use-case and supplementary specifications.

## Scope of the Document

This document includes the course team project goals, the project goals, the project team, the advised project development approach, the necessary software tools, the deliverables, the project assessment criteria, the related references, and the grading rubric.

## References

|  |  |  |
| --- | --- | --- |
| **Reference Title/Name** | **Date** | **Version** |
| Projection Description Doc | 02/03/2025 | 2.0 |
| Project Vision Document (PVD) | 02/13/2025 | 1.0 |
| Project Plan (PP) | 02/18/2025 | 1.0 |
| IEEE/ISO/IEC 29148-2018 - ISO/IEC/IEEE International Standard - Systems and software engineering -- Life cycle processes -- Requirements engineering | 02/27/2025 | 2018 |
| Web Content Accessibility Guidelines (WCAG) | NA | 2.0 |
| … | … | … |

## Definitions, Acronyms, and Abbreviations

|  |  |  |
| --- | --- | --- |
| **Term** | **Abbreviation / Acronym** | **Definition** |
| Project Vision Document | PVD | PVD is the document that describes the vision for the project. The vision document also outlines the scope for the project. |
| Project Plan | PP | PP is the document that describes the plan for the successful completion of the project. |
| Software Requirements Specification | SRS | SRS is the document that describes the requirements for the project. |
| Software Design Description | SDD | SDD is the document that describes the design for the project. |

# Product Scope

The product scope of Job Nexus is to build an AI-powered platform that simplifies the process of job seeking and hiring. It provides AI-powered resume building, job searching, and application tracking for job seekers. For hiring managers, it provides AI-powered resume analysis and candidate filtering. Out of scope for the initial release are features like a recruiter management panel and complete user sign-up that will be introduced in subsequent releases to continue enhancing the capabilities of the platform.

# Product Users

## Users

|  |  |
| --- | --- |
| **Product User Type** | **User Characteristics** |
| Jobseeker | Users include students, recent graduates, and working professionals. Range from basic to highly technical internet users. All ages from young adults to mid-professional careers are represented. Education levels range from current students to individuals with extensive professional experience. |
| Recruiter | Individuals like corporate recruitment managers, program managers, and private employers. Age 18 and above. From basic internet users to highly technical people who use advanced recruitment tools and HR software. Usually have a higher education qualification in business or HR. |
| Admin User | Technical personnel who take care of platform maintenance, feature enhancements, user management, and data analysis. Proficient in web applications and databases. |
| Customer Support User | Platform-trained specialists who support jobseekers and recruiters with platform problems, guide them, and clarify questions. Skilled in the use of online communication tools. |

# Use Cases

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | **Brief Description** |
| UC-1 | Account Registration & Profile Setup | This use case discribes a job seeker signing up for a new account and creating a personal profile, i.e., contact details, education, and employment history, and adding a resume/CV. |
| UC-2 | AI-Assisted Resume/CV Builder | It provides job applicants with an AI-based tool to craft or tailor resumes and CVs according to job templates or job descriptions to boost their chances of getting matched with their desired jobs. |
| UC-3 | Job Search with Advanced Filters | Job seekers look for employment based on advanced filters such as keywords, location, and salary. Visa-friendly employment filtering for international candidates can be accomplished on the site. |
| UC-4 | Job Application Submission & Tracking | Job seekers submit their applications to job openings directly from the site and are able to monitor the status of each application from submission to decision, with real-time notifications. |
| UC-5 | Job Recommendations & Career Insights | The site offers personalized job suggestions and gives feedback on job search activity, including profile views and application responses, in order to make the job search process more efficient for job seekers. |
| UC-6 | Job Simulation for Skill Assessment | Job seekers can engage with interactive simulations based on job descriptions to assess and improve their skills in preparation for applications. |
| UC-7 | Post New Job Listing | Recruiters post new job vacancies, with the platform assisting to refine the content using AI-powered suggestions for a good job description. |
| UC-8 | Manage Job Postings | Recruiters manage and update their job postings, including closing filled positions or extending listings as necessary, while tracking application numbers and listing performance. |
| UC-9 | Candidate Search and Filtering | Recruiters utilize the platform to source and screen candidates against defined parameters such as skills and visa status, with the help of AI for effective sorting and ranking. |
| UC-10 | Review Candidate Profiles | Recruiters go through resumes and candidate profiles, and AI-powered insights and summaries are presented to allow a quick evaluation of the candidate's suitability. |
| UC-11 | Hiring Analytics & Reporting | Recruiters are given in-depth analytics and records of their recruiting activities so that they may comprehend and enhance their hiring procedures and results. |

# Functional Requirements

## Software Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Requirement Priority**  **(**High/Medium/Low**)** | **Requirement** |
| SR-01 | Low | The system shall allow users to create an account and log in using their email address and password. |
| SR-02 | Low | The system shall allow the user to create an account for the respective category and allow them to login with the respective credentials. |
| SR-03 | Low | The system shall display the respective home page for the user depending on his category. |
| SR-04 | Medium | The system shall display a page consisting of the following buttons grouped in a category for a recruiter: post jobs, check responses, track application statuses and close job openings. |
| SR-05 | Medium | The system shall display the following button in the same page for the recruiter: Ge.t Candidate list |
| SR-06 | Medium | The system shall provide a text area box where the recruiters can type the filters that would like to filter the candidate with. |
| SR-07 | High | The system shall display the following buttons for a job seeker under the job simulation category: Generate Resumes, Generate Flashcards, generate quizzes depending on the inputs given. |
| SR-08 | High | The system shall display the following buttons under the category Hiring Analytics for a job seeker: Track Application Statuses, Generate Job Reports, Generate Job Openings/postings |
| SR-10 | Medium | The system shall provide all the job openings according to the candidate’s experience and skills |
| SR-11 | Medium | The system shall display an Apply button to select the job and apply to it. |
| SR-12 | Low | The system shall provide a Home button/link to go back to the home page. |
| SR-13 | Low | The system shall provide a button at the top rightmost corner of the screen for the respective user to logout. |
| SR-14 | Medium | The system shall display fields for a user to register after he clicks on the signup button. |

## Hardware Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Requirement Priority**  **(**High/Medium/Low**)** | **Requirement** |
| HR-1 | High | The system shall operate with a computing device with a minimum of 16GB RAM for optimal performance since the AI model would require a lot of space to train models |
| HR-2 | High | The system shall have a reliable internet connection with a minimum speed of 10 Mbps for seamless online access as jobs get added daily and thousands of students apply at the same time. |
| HR-3 | High | The system application servers shall have backup power to ensure uninterrupted operation during power outages and at times of peak traffic. |
| HR-4 | High | The system should have a minimum of 1TB of storage space for data storage and system files. |
| HR-5 | High | We should have multiple systems running parallely in the cloud during deployment and live server testing. |

# Quality Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Requirement Priority**  **(**High/Medium/Low**)** | **Requirement** |
| QR-01 | Medium | The system shall ensure user registration for a job seeker loads within 2 seconds after you click it. |
| QR-02 | Medium | The system shall process the user logins within a second. |
| QR-03 | High | The system shall ensure that the UI/UX design is simple, easy to use (esp. for specially challenged people) and intuitive. |
| QR-04 | Medium | The system shall ensure that the user filters for both the recruiters and job seekers work as expected according to the user needs and descriptions. |
| QR-05 | High | The system shall ensure that strict encryption with proper access controls for user data is applied along with GDPR compliance. |
| QR-06 | Medium | The system shall ensure that the infrastructure needed to scale the application for higher user loads is properly setup and working as expected. |

# Appendix A – Requirements Traceability

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Related Requirements** | **Test Case ID** |
| Req-Func-Sw-1 | Req-Func-Sw-4  Req-Func-Hw-2  Req-Qual-Sec-1 | Test-Case-1 |
| Req-Func-Sw-2 | Req-Func-Sw-3  Req-Func-Hw-2  Req-Qual-Sec-5 | Test-Case-2 |
| Req-Func-Sw-3 | Req-Func-Sw-2  Req-Func-Hw-1  Req-Qual-Sec-1 | Test-Case-3 |

# Appendix B – Use Case 1 – User Registration

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | UC-1 | |
| **Use Case Name** | User Registration | |
| **Brief Description** | This use case describes the user registration of the online marketplace by acquiring the user’s personal information, creating an account, and setting up login credentials. | |
| **Frequency of Use** | High – 80% | |
| **Priority** | High | |
| **Current Version** | 1.0 | |
| **Date of First Version** | 02/26/2025 | |
| **Date of Last Version** | 03/1/2025 | |
| **Created By** | Sumana Sree Pasupuleti, Bhavani Sathi | |
| **Last Update By** | Mohammed Ali Sheriff Shaik | |
| **Approved By** | Mohammed Ali Sheriff Shaik, Bhavani Lakshmi Sathi, Sumana Sree, Pranav Malleboyina | |
| **Assumptions** | The user has access to a valid email address.  The user has provided all the required information for registration. | |
| **Primary Actor** | User | |
| **Secondary Actor/s** | None. | |
| **Preconditions** | The user must have a valid email ID for registration and sign up. | |
| **Postconditions** | The user's registration information is saved in the system.  The user receives a confirmation email. | |
| **Trigger** | The user clicks on Sign Up/Register. | |
| **Main Success Scenario** | **User Actions** | **System Actions** |
|  | 1. The user navigates to the registration page.  2. The user clicks on Sign Up/Register.  4. The user enters the user’s information.  6. The user submits the registration form.  8. The user receives the confirmation email and verifies their account. | 3. The system displays the user registration form.  5. The system validates the user's information.  7. The system sends a confirmation email to the user.  9. The system validates if the user is verified.  10. The system creates the user account on successful verification. |
| **Alternate Scenarios** | **User Actions** | **System Actions** |
|  | 2.a. The user tries to sign in without registering.  4.b. The user enters an existing email in the Sign-Up/Register page.  4.c. The user enters invalid details in the Sign-Up/Register.  8.d. The user does not complete the verification process. | 3.a. The system requests the user to register first.  5.b. The system detects that the entered email address is already associated with an existing account and the system prompts the user to enter a different email address or to log in using the existing account.  5.c. The system validates the user details and reports the issues.  9.d. The system does not authenticate the user until the verification is completed. |
| **Additional Notes (Constraints, etc.)** | None. | |

# Appendix B – Use Case 2 – Job-Search

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | UC-2 | |
| **Use Case Name** | Job-Search | |
| **Brief Description** | Users search for job listings using filters and keywords. | |
| **Frequency of Use** | High – 90% | |
| **Priority** | High | |
| **Current Version** | 1.2 | |
| **Date of First Version** | 03/4/2025 | |
| **Date of Last Version** | TBA | |
| **Created By** | Pranav Pratheek Malleboyina | |
| **Last Update By** | Mohammed Ali Sheriff Shaik | |
| **Approved By** | Team Bridgers | |
| **Assumptions** | The user is logged into the system.  The user is in a pc device. | |
| **Primary Actor** | User | |
| **Secondary Actor/s** | None. | |
| **Preconditions** | The user has searched for jobs and applied filter specifications | |
| **Postconditions** | Jobs are displayed based on the user search and priority. | |
| **Trigger** | The user decides to apply based on his interests. | |
| **Main Success Scenario** | **User Actions** | **System Actions** |
|  | 1. User navigates to job search.  3. User enters job preferences and initiates a search.  5. User selects a job for further details. | 2. System displays search filters.  4. System retrieves and displays matching job listings.  6. System loads the job description page |
| **Alternate Scenarios** | **User Actions** | **System Actions** |
|  | 5.a. User enters an invalid keyword.  5.b. No jobs match the criteria. | 6.a. System suggests alternative keywords  6.b. System suggests related job listings. |
| **Additional Notes (Constraints, etc.)** | The system should display relevance score based on user profile. | |

# Appendix D – Use Case 3- Job Application Submission

|  |  |
| --- | --- |
| Use Case ID | UC-3 |
| Brief Description | Job Application Submission |
| Frequency of Use | High – 75% |
| Priority | High |
| Created By | Sumana Sree Pasupuleti |
| Approved By | Bhavana Sathi |
| **Main Success Scenarios:** |  |
| **User Sections** | System Actions |
| 1. User selects a job and clicks ‘Apply’. | 2. System prompts for resume upload. |
| 3. User uploads resume and submits. | 4. System confirms submission and notifies recruiter. |
| **Alternate Scenarios:** |  |
| 3.a. User applies without logging in. | 4.a. System prompts login. |
| 3.b. User uploads an unsupported file. | 4.b. System displays error and suggests valid formats. |

# Appendix E – Security & Compliance

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| --- | --- |
| **Security Requirement ID** | **Description** |
| Sec-01 | Enforce strong password policies. |
| Sec-02 | Implement two-factor authentication. |
| Sec-03 | Encrypt user data in transit and at rest. |
| Sec-04 | Ensure GDPR and CCPA compliance. |

This document now includes all key use cases from User Registration to Interview Scheduling, ensuring a complete end-to-end process for job seekers and recruiters. Security have also been covered comprehensively.