# Software Requirements Specification (SRS)

**Project Name:** JobAIAssistant  
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## 1. Introduction

### 1.1 Purpose

The purpose of this document is to define the requirements for the JobAIAssistant project, which aims to automate job applications across popular job portals like LinkedIn, Naukri, and others. The system will intelligently match job listings to a user profile and automate or semi-automate the application process.

### Intended Audience

* Developers and engineers responsible for implementing the system
* Project stakeholders or contributors
* QA engineers writing test plans

### Scope

JobAIAssistant will:

* Allow users to input their professional data and preferences
* Crawl job portals for suitable listings
* Rank jobs using a confidence scoring algorithm
* Automate or assist with the application process depending on the type of job portal
* Send job applications via email where applicable
* Store and reuse user data for subsequent applications

### 1.4 Definitions

* **Internal Job Portal**: A job application page within a job portal (e.g., Naukri, LinkedIn Easy Apply)
* **External Website**: Redirected job application site (e.g., company career page)
* **Confidence Score**: A numerical score representing the suitability of a job to the user's profile

## 2. Overall Description

### 2.1 Product Perspective

This is a standalone automation system with the potential to plug into APIs or web interfaces. It will include both a command-line and dashboard interface for configuration.

### 2.2 User Classes and Characteristics

* **Job Seekers**: Primary users providing resume and preferences
* **Admin/User (Advanced)**: Configure crawling rules, job filters, resume versions, and email templates

### 2.3 Operating Environment

* Operating Systems: Windows, macOS, Linux (Python-based backend)
* Browser automation: Chromium (via Playwright/Selenium)
* Email: Gmail (via OAuth 2.0 and Gmail API)

### 2.4 Design and Implementation Constraints

* Must respect terms of use for job portals
* Cannot bypass CAPTCHAs or 2FA without user help
* Gmail OAuth must be handled securely

### 2.5 Assumptions and Dependencies

* Portals like LinkedIn and Naukri may change their HTML structure or APIs
* User interaction might be required for sign-up forms

## 3. Functional Requirements

### 3.1 User Profile Management

* Upload resume (PDF/DOCX)
* Input current and expected CTC, location, and technologies
* Configure preferred job roles, locations, and industries

### 3.2 Job Scraping & Filtering

* Crawl LinkedIn, Naukri, and other configured sites
* Fetch job descriptions and metadata
* Calculate confidence score based on user profile

### 3.3 Job Application Automation

* Internal portals: Auto-fill forms and upload resume
* External sites: Notify user and fill form with confirmation
* Email-based: Compose and send emails with resume

### 3.4 Smart Reuse of Data

* Save previously used data fields
* Auto-fill repeated fields in future applications

### 3.5 Dashboard/Config UI

* Job search filter configuration
* Resume version management
* Email template selection
* Application logs view

## 4. Non-Functional Requirements

### 4.1 Usability

* Simple UI for non-technical users
* CLI for power users

### 4.2 Performance

* Crawl 50–100 job listings per minute without blocking

### 4.3 Security

* Use OAuth 2.0 for Gmail integration
* Encrypt stored user credentials and tokens

### 4.4 Portability

* Should run on any OS with Python installed

### 4.5 Maintainability

* Modular codebase for easy extension (new portals, formats)

## 5. User Interface Requirements

* Web dashboard for user profile management and config
* CLI with interactive prompts (optional mode)
* Resume parsing status and job match insights in UI

## 6. Assumptions and Dependencies

* HTML structure of job sites remains stable
* Gmail access is granted by user
* Jobs allow applications via portal/email
* Internet connectivity is stable for automation to proceed

End of SRS