Software Requirement Specification (SRS)

Project: Auto Job Apply System

Prepared For: Project Stakeholders

Prepared By: [Your Name / Team]

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1. Introduction

1.1 Purpose

The purpose of this document is to specify the functional and non-functional requirements for the Auto Job Apply System. The system will automatically apply jobs on behalf of a user based on their resume, skills, and specified job titles.

1.2 Scope

The Auto Job Apply System enables users to connect job platforms (LinkedIn, Naukri, etc.), provide resume and personal details, and automatically apply to jobs. The system will also rate job matches using ML, suggest resume enhancements, and maintain a history of applied jobs. Future enhancements include job apply limits, subscription payments, and Gmail integration.

1.3 Definitions, Acronyms, Abbreviations

• ML: Machine Learning • OAuth: Open Authorization • DB: Database • UI: User Interface • OTP: One-Time Password

2. Overall Description

2.1 Product Perspective

This system is a SaaS-based web platform where users can log in using Google, Microsoft, Apple, or email+OTP. Once logged in, they configure job platform credentials, provide resume and profile details, and the system automatically applies jobs.

2.2 User Roles

• Candidate: Provides details, connects job platforms, tracks applications. • Super Admin: Adds job platforms, manages subscriptions, has no job apply limit.

2.3 Product Functions

• Secure Login & Authentication • Resume & Profile Management • Auto Job Apply on LinkedIn/Naukri • Job Matching & Rating • Resume Enhancement Suggestions • Job Application History • Payment Gateway Integration • Super Admin Controls

3. Functional Requirements

FR1: User Authentication - Login via Google, Microsoft, Apple OAuth - Login via email with OTP - Secure credential management

FR2: Profile Management - Capture personal details (First Name, Last Name, Email, Phone, Current LPA, Expected LPA, Resume Upload, Skills, LinkedIn/Naukri credentials) - Dropdown for job platforms with add/remove logic.

FR3: Job Auto Apply - Automatically search & apply for jobs based on titles - Store application logs in DB - Daily apply limit per user (5/day) except admin.

FR4: Job Matching & Resume Rating - Display top 5 job descriptions with match rating - Explain missing skills/keywords - ML-based resume enhancement.

FR5: Job Application History - Display applied jobs in descending order - Fields: Company Name, Job Title, Job Description, Date.

FR6: Payment Integration - Monthly subscription model - Support for credit/debit cards, UPI, PayPal.

FR7: Super Admin Controls - Add new job platforms - Unlimited job apply - Manage user permissions and subscriptions.

4. Authentication & Security

• OAuth 2.0 for Google, Microsoft, Apple • Email OTP login • Encryption of credentials (AES-256 + salt) • Secure storage in DB (hashed tokens) • Role-based access control

[Diagram: Authentication Flow with OAuth Scopes]

5. Database Schema

Tables: • Users(UserID, Name, Email, Role, AuthProvider, Subscription) • Profiles(UserID, Resume, Skills, LPA, ExpectedLPA, Platforms) • JobPlatforms(PlatformID, Name, CredentialsEncrypted) • Applications(AppID, UserID, JobTitle, Company, Description, Status, Date) • Payments(PaymentID, UserID, Amount, Date, Plan)

[Diagram: ERD - User, Profiles, JobPlatforms, Applications, Payments]

6. System Architecture & Flow

• Frontend: Flutter Web / React • Backend: Python FastAPI / Node.js • DB: PostgreSQL + Redis cache • ML Engine: Resume Parsing & Matching (scikit-learn/transformers) • Deployment: Azure / AWS [Diagram: High-level System Architecture] [Diagram: Job Auto Apply Workflow]

7. AI/ML Components

• Resume Parsing: spaCy / BERT-based parser • Job Match Scoring: cosine similarity + ML classification • Resume Enhancement: LLM-based keyword suggestion • Training Data: Job descriptions, resumes dataset

8. Non-Functional Requirements

• Performance: Apply 100 jobs/minute per user max • Security: AES-256 for credentials, JWT for sessions • Compliance: DPDP 2023 (India), GDPR (EU) • Scalability: Multi-tenant architecture • Availability: 99.9% uptime (cloud hosted)

9. Future Enhancements

• Gmail integration for auto-reply on applied jobs • AI chatbot for job recommendations • Analytics dashboard for success tracking • Support for additional job portals (Indeed, Monster, Glassdoor)

10. Appendices

OAuth Scopes: • Google: profile, email • Microsoft: User.Read • Apple: name, email Encryption Methods: • AES-256 for sensitive data • Hashing: bcrypt for passwords API References: • LinkedIn API (Job Apply) • Naukri API (Job Apply)