ResuMate – AI Powered Recruitment Automation Platform

1. Introduction

1.1 Purpose of the Document

This document provides **complete and detailed documentation** for **ResuMate**, an AI powered recruitment and resume analysis tool.

It is intended for:

 - Product stakeholders

- HR teams and recruiters

- Developers and technical teams

 - Management and decision makers

The documentation explains **what the tool does, how it works, and how users interact with it**, in a professional and easy to understand manner.

1.2 Product Overview

ResuMate is an intelligent recruitment platform designed to help HR teams and recruiters **automatically identify the most suitable candidates** for a specific job role using Artificial Intelligence.

The platform analyzes job descriptions and resumes, calculates ATS (Applicant Tracking System) scores, matches skills and experience, and generates clear candidate reports — all with minimal manual effort.

The **frontend UI is built using React**, while AI and automation handle resume parsing, scoring, and matching in the **backend using N8N**.

2. Key Objectives of ResuMate

- Reduce manual resume screening time
- Improve hiring accuracy and consistency
- Eliminate bias through data driven evaluation
- Provide ATS compliant scoring and insights
- Enable faster shortlisting and decision making

3. User Roles

3.1 Recruiter / HR Admin

- Create job descriptions
- Upload or receive resumes via Emails or Bulk upload
- Initiate resume scanning
- View candidate reports and scores
- Export reports and manage hiring data

3.2 System (AI Engine)

- Parse job descriptions
- Extract resume data
- Match skills, experience, and keywords
- Calculate ATS and match scores
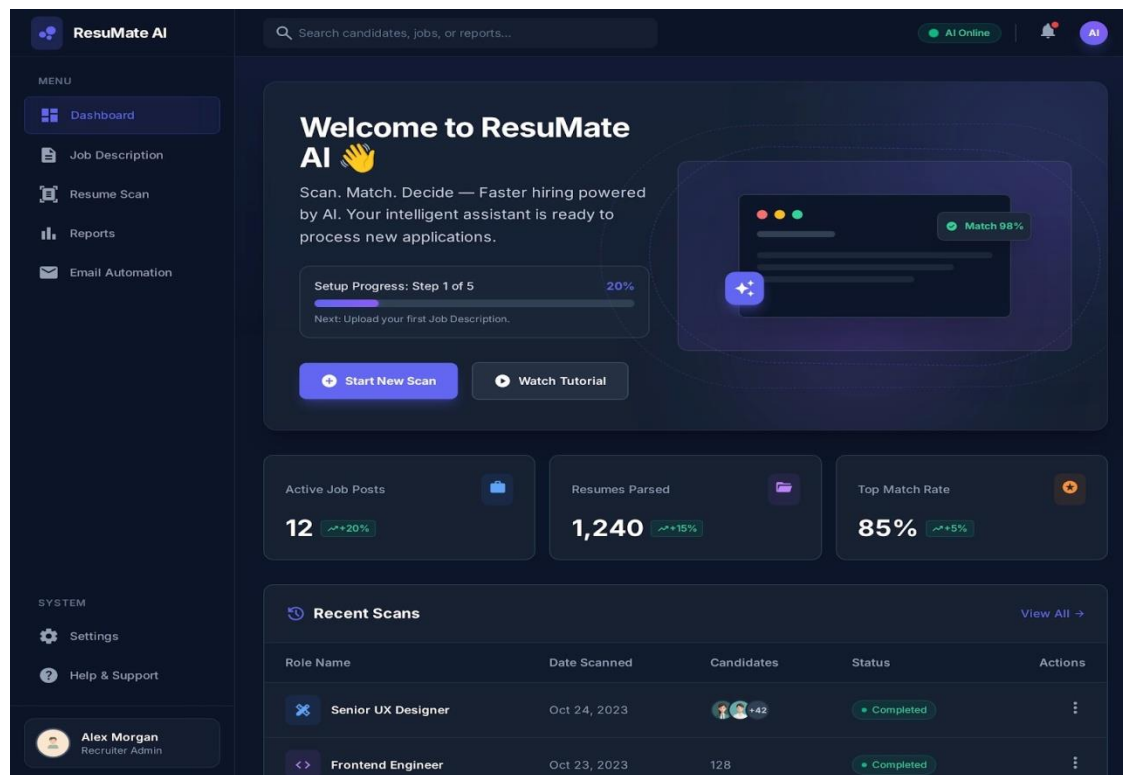- Generate structured reports

4. Application Flow Overview

1. Recruiter logs into ResuMate
2. Creates or uploads a job description
3. Adds candidate resumes (email or bulk upload)
4. AI processes and analyzes resumes
5. System generates ATS scores and match results
6. Recruiter reviews candidate reports
7. Final shortlisting decision is made

5. Dashboard Module

5.1 Dashboard Overview

The dashboard is the **central control panel** of ResuMate. It provides a real time overview of recruitment activity.

This is the **main dashboard (home screen)** of **ResuMate AI**, an **AI-driven hiring assistant** that helps recruiters:

- Upload job descriptions
- Scan and parse resumes
- Match candidates using AI
- Track hiring metrics
- Automate recruitment workflows

Search Bar

"Search candidates, jobs, or reports…"

- Global search across:
    - Candidates
    - Job descriptions

- o Reports
- Improves recruiter productivity

AI Status Indicator

- **"AI Online"** badge
- Shows AI engine availability
- Builds user trust in automation

Notifications

- Bell icon for:
    - o Scan completion
    - o New candidate matches
    - o System alerts

User Profile

- Profile picture
- Likely opens:
    - o Account settings
    - o Logout
    - o Preferences

5.2 Left Sidebar Navigation (Main Menu)

MENU Section

1. **Dashboard** (Active)
    - o Overview of system metrics
2. **Job Description**
    - o Create or upload job descriptions
    - o AI uses this for matching
3. **Resume Scan**
    - o Upload resumes
    - o Trigger AI parsing & scoring
4. **Reports**
    - o Hiring analytics
    - o Match performance
    - o Recruiter insights
5. **Email Automation**
    - o Automated candidate emails
    - o Interview invites
    - o Rejections / follow-ups

SYSTEM Section

- **Settings**
  - AI thresholds
  - Matching rules
  - User preferences
- **Help & Support**
  - Tutorials
  - FAQs
  - Support contact

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6. Job Description Module

6.1 Purpose

This module allows recruiters to define **role requirements**, which serve as the foundation for AI based resume matching.

6.2 Job Description Creation Methods

Option 1: Create Your Own

- Drag and drop role elements from the library
- Select job role (e.g., Senior Frontend Developer)
- Define experience range
- Add location and required skills

Option 2: Paste Description

- Paste raw job description text
- AI automatically parses and extracts:
  - Skills
  - Education
  - Experience
  - Keywords

6.2 Navigation & Context (Top Area)

Dashboard → New Job Posting → Job Description

- Shows where the user is in the workflow
- Confirms this is part of a **multi-step job posting process**

6.3 Left Sidebar – JD Component Library (Drag & Drop)

- Library (Drag to Add)
-Job Roles

- Senior Frontend Dev
- Product Manager
- UX Designer etc

- These act as **predefined role templates**

-Experience

- Junior (0–2 yrs)
- Senior (5–8 yrs) etc

- Helps AI quickly understand seniority

-Location

- Used for geo-based candidate filtering
- (Expandable)

-Skills

- (Expandable)
- Technical & soft skills
- Crucial for ATS scoring

6.4 Middle Panel – "Create Your Own" JD Builder

Purpose

This panel is for **building the JD visually**.

-Selected Components

- **Role:**
- **Experience:**

-Drag Area

- "Drag items here"
- Allows adding:
    - Skills
    - Location
    - Education
    - Responsibilities

-Clear Button

- Resets the JD structure

- **Why this matters:**

- Ensures standardized JDs
- Improves AI matching accuracy
- Avoids vague job descriptions

6.5 Right Panel – Paste Job Description (Raw Input)

Paste Description Section

- Allows pasting **raw JD text** (Ctrl + V)
- Supports:
    - **Raw** view
    - **Parsed** view

Auto-Parsing Enabled

- AI automatically extracts:
    - Skills
    - Experience

- o Education
- o Tools & technologies

- **Benefits of having both:**

- Manual drag-drop + AI parsing
- Flexible for all recruiters

6.6 Bottom Action Buttons

-Review and Save

- Saves JD as draft
- Allows later editing

-Continue →

- Moves to **next step** (Resume Scan / Matching)
- Enforces structured workflow

7. Resume Scan Module

7.1 Purpose

This module is used to **import candidate resumes** into the system for analysis.

7.2 Resume Upload Methods

7.2.1 Upload via Email

Allows recruiters to **forward resumes directly via email**, commonly used when:

- Candidates email resumes
- Recruiters receive resumes from job portals
- External agencies share profiles

-Functionality

- Any resume sent to this email:
  - Is automatically captured
  - Parsed by AI
  - Linked to the correct job posting

7.2.2 Bulk Upload

-Features

- Drag & drop multiple files
- Browse from local system
- Supports bulk uploads

-Use Cases

- Campus hiring
- Walk-in interviews
- Vendor-provided resume folders
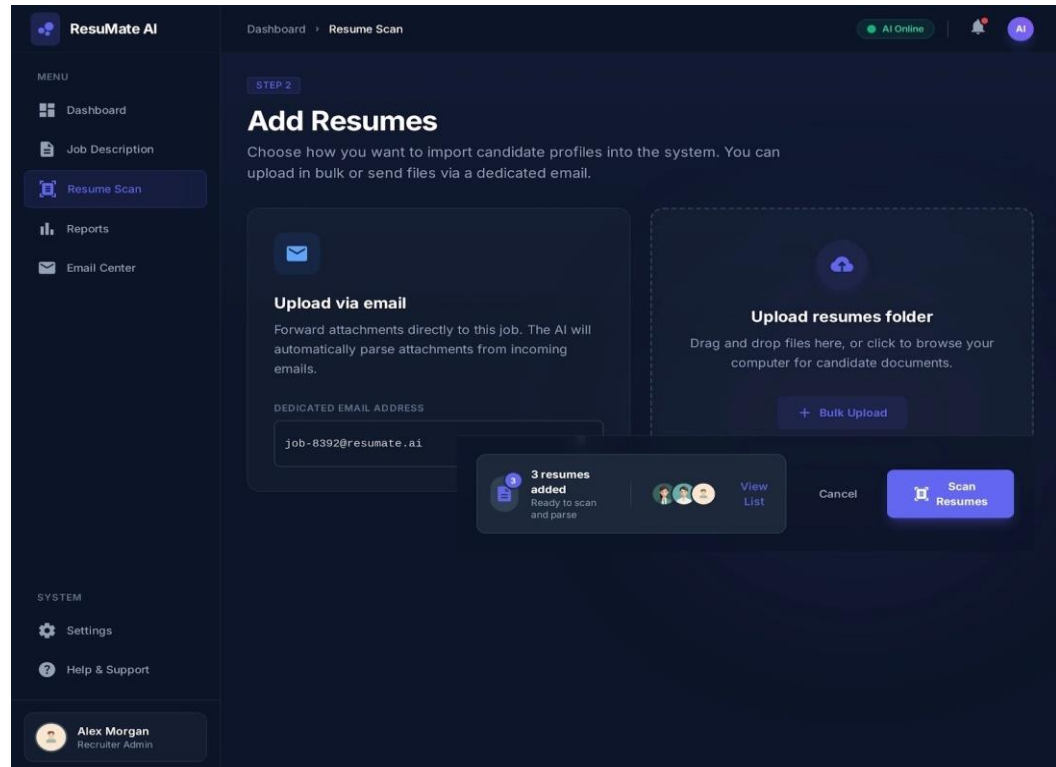
7.3 Action Buttons (Bottom Right)

-Cancel

- Discards current upload session
- No data is processed

-Scan Resumes

- Triggers AI resume parsing
- Starts:
  - Text extraction
  - Skill tagging
  - ATS scoring
  - JD matching

8. AI Resume Processing Engine

8.1 Purpose

This page informs the recruiter that **AI is actively processing resumes** and performing:

- Resume text extraction
- ATS compliance checks
- Skill matching
- Experience comparison
- Location matching

8.2 Processing Batch Card (Left Section)

-Batch Information

This indicates:

- Batch-based processing
- Scalable architecture for bulk resumes

8.3 AI Analysis Pipeline (Right Section)

This section shows **which AI modules are active or pending**.

8.4 Call-to-Action Button

-Check Report →

- Becomes active once processing completes
- Navigates to:
    - Candidate ranking
    - ATS scores
    - Match percentages
    - Detailed AI insights

ResuMate AI is analyzing resumes...

Please wait while our algorithms process candidate profiles. This usually takes less than a minute.

Processing Batch #402
18/25 files analyzed

72%
~12s remaining

```
> Initializing OCR module...
> Parsing PDF structure: candidate_john_doe.pdf
> Extracting entities: [Skills, Experience, Education]
> Matching keywords: "React", "TypeScript"
> Calculating relevance score...
> Processing next file...
```

Cancel Process

⊕ Run in Background

✓ **ATS Score calculation**
Scanned text for readability and format compliance.

⟳ **Skill matching**
Comparing extracted skills against job requirements...

Experience comparison
Pending analysis

◉ **Location match**
Pending analysis

Check Report →

9. Candidate Reports Module

9.1 Purpose

The **Candidate Reports** page allows recruiters to:

- View AI-scored candidates for a specific role
- Compare ATS scores, experience, and location
- Filter candidates using AI-powered criteria
- Identify top, strong, good, and weak matches
- Drill down into detailed AI reports

9.2 AI Filters (Quick Chips)

- **Strong Match**
- **Remote Only**
- **Exp > 5y**
- **More Filters**

These allow **AI-assisted shortlisting** in seconds.

9.3 Export & Actions

- **Export CSV**
  - Download candidate data for sharing
- **+ New Assessment**
  - Trigger additional AI tests or evaluations

9.4 Candidate Card Details

- Candidate name and email
- ATS score
- Experience (years)
- Location
- Matched skills

9.5 AI Match Classification Badges

- Top Candidate
- Strong Match
- Good Match
- Review Needed
- Weak Candidate

ResuMate AI

MENU

Dashboard
Job Description
Resume Scan
Reports
Email Center

SYSTEM

Settings
Help & Support

Alex Morgan
Recruiter Admin

Search candidates...

● AI Online

Candidate Reports
📍 Senior UX Designer • 24 Applicants

⬇ Export CSV   + New Assessment

🔍 Search by name, email, or skills...   Strong Match ✕   Remote Only   Exp > 5y ∨   ⇌ More Filters

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Maya Roberts
maya.roberts@gmail.cor   **94%**

ATS SCORE	EXPERIENCE	LOCATION
92/100	7 Yrs	London

Figma   React   CSS   +3 more

● Strong Match   View Report →

James Chen
j.chen@outlook.cor   **82%**

ATS SCORE	EXPERIENCE	LOCATION
78/100	4 Yrs	Remote

Sketch   UX Research
Prototyping

● Good Match   View Report →

Sarah Lee
sarah.lee@design.c   **65%**

ATS SCORE	EXPERIENCE	LOCATION
60/100	2 Yrs	NYC

Adobe XD   Graphic Design

● Review Needed   View Report →

David Kim
david.kim@tech.ne   **97%**

ATS SCORE	EXPERIENCE	LOCATION
95/100	8 Yrs	Berlin

Figma   Framer   Leadership

● Top Candidate   View Report →

Mark Wilson
m.wilson@demo.cor   **32%**

ATS SCORE	EXPERIENCE	LOCATION
25/100	1 Yr	Remote

HTML   Basic CSS

● Weak Candidate   View Report →

Emma Davis
emma.d@creative.i   **79%**

ATS SCORE	EXPERIENCE	LOCATION
75/100	3.5 Yrs	Austin

Sketch   Figma   Webflow

● Good Match   View Report →

10. Reports & Analytics

10.1 Purpose

The **Candidate Detail page** helps recruiters:

- Understand **why** a candidate was shortlisted
- Review AI match logic and transparency
- Identify skill gaps and strengths
- Make interview / reject decisions confidently
- Add recruiter notes and collaboration input

10.2 Header & Candidate Identity

-Candidate Name

-Status

-Role & Location

-Primary Actions

- **Resume** → Download or view resume
- **Reject** → Move candidate to rejection workflow
- **Schedule Interview** → Trigger interview scheduling + email automation

10.3 Overall Match Summary

-What This Means

- Composite score from:
    - ATS score
    - Skill match
    - Experience alignment
    - Industry relevance
    - Location fit

10.4 Candidate Snapshot Cards

-Experience

-Education

-Current Role

This gives quick professional context

10.5 Missing Skills Panel (Risk Awareness)

-Critical Requirement Missing

-Nice to Have

View suggested training paths

- AI recommends learning resources
- Helps workforce upskilling decisions

10.6 Skill Match Breakdown

- Hard skills

- Soft skills

    - For skills matches are shown in bars

10.7 Contact Information Panel

- Email info
- Mobile number
- LinkedIn profile
- Portfolio website

10.8 Recruiter Notes (Collaboration Layer)

Features

- Timestamped notes
- Multi-recruiter collaboration
- Decision documentation

Candidates › Frontend Engineering › Alex Jensen

Alex Jensen IN REVIEW
Senior Frontend Engineer •
San Francisco, CA

⬇ Resume   ✕ Reject   📅 Schedule Interview

✔ AI Verdict: Recommended for Interview ●
Strong match for React and TypeScript requirements. Experience aligns well with Senior level expectations despite slight domain mismatch.

View Logic

⚠ Missing Skills

● **GraphQL**
CRITICAL REQUIREMENT
Not found in resume or portfolio.

● **AWS / Cloud Ops**
NICE TO HAVE
Basic knowledge implied but no certification.

View suggested training paths

OVERALL MATCH
82%

↗ Top 5% of applicants

🕑 EXPERIENCE
6.5 Yrs
Req: 5+ Years

🎓 EDUCATION
B.S. Co...
Univ of Washington

💼 CURRENT ROLE
Frontend Lead @ FinTech Co

Contact Information 🔲

✉ alex.jensen@example.com

📞 +1 (555) 123-4567

🔗 linkedin.com/in/alexjensen

🌐 alexjensen.dev

Skill Match Breakdown   Hard Skills   Soft Skills

React.js   95%
TypeScript   88%
Node.js   70%
System Design   60%

✦ Experience Comparison

Job Duration Alignment   EXCEEDS
Candidate has **6.5 years** of relevant experience versus the required **5 years**. Stability score is high.

Industry Fit   PARTIAL MATCH
Previous role was in **E-commerce**. Current role requires **Fintech** domain knowledge.

Leadership Experience   MATCH
Resume indicates 2 years of experience leading a team of 4 frontend developers.

Recruiter Notes   +

Ⓢ Sarah M.   2h ago
Seems promising. I like the leadership experience. Let's dig deeper into the GraphQL gap during the screen.

Type a new note...

B ☰ ➤

11. Email Automation Module

11.1 Purpose

The **Email Automation** page allows recruiters to:

- Send **AI-generated emails** to candidates
- Customize offer, selection, or rejection emails
- Maintain consistent, professional communication
- Reduce manual emailing effort
- Trigger hiring workflows automatically

11.2 Key Features and Functionalities

-Candidate Summary Card

Candidate Details

- **Name**
- **Email**
- **Role**
- **Match Score:**
- **Interview Status**

View Profile Button

- Opens full candidate profile
- Allows quick cross-verification

-Email Type Selection

Tabs

- **Selection Email** (Active)
- **Rejection Email**

Recruiters can quickly switch between:

- Offer / selection emails
- Rejection or fallback emails

-Editable Email Composer

- Recruiters can edit recipients, subject, and email content
- Supports basic text formatting for customization

-AI Editing Controls

- *Make Friendlier* adjusts tone
- *Shorten* reduces length while keeping key information

-Status Indicators

- "AI Draft Ready" confirms email is prepared
- "AI Online" indicates AI services are active

12. System Architecture

12.1 Frontend Architecture (React)

Technology Stack

- React.js
- Component based architecture
- Reusable UI components
- State management (Context / Redux)

UI Principles

- Dark modern UI
- High readability
- Minimal learning curve
- Responsive design

12.2 Backend Architecture

Technology Stack

- **n8n** – Workflow automation and AI orchestration
- **Java** – Business logic and service layer
- **Mongo DB** – Resume, job, and candidate data storage
- **REST APIs** – Secure communication between frontend and backend

Backend Responsibilities

- Resume ingestion and processing workflows
- AI resume parsing and ATS score calculation
- Job–resume matching logic
- Report generation and data export
- Email automation and background processing

12.3 Frontend–Backend Interaction

- Frontend communicates with backend via secure REST APIs
- Backend processes requests and triggers n8n workflows
- Mongo DB stores structured resumes, scores, and reports
- Results are returned to frontend in real time