

Niajiri ATS – Specification Document

Document Control

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1. Executive Summary

Niajiri ATS is a **role-based, scalable recruitment platform** designed for the African job market, serving Employers, Job Seekers, and now, System Administrators. The goal is to provide a modular and intelligent system for managing the entire hiring lifecycle, supported by **robust analytics, content moderation, and comprehensive administrative oversight**. This version 1.0 focuses on enhancing robustness, security, and scalability for enterprise-level implementation.

2. Purpose

Niajiri ATS is a dual-facing recruitment and job search platform for Employers/Recruiters and Job Seekers/Applicants. The platform streamlines hiring processes while enhancing application quality and visibility for job seekers. This document also accounts for a dedicated **System Administrator** role to ensure platform health, user management, and content moderation.

3. Target Users

- **Employers / Recruiters**
 - **Roles:** HR Managers, Talent Acquisition, Agency Recruiters
- **Job Seekers / Applicants**
 - **Roles:** Active job hunters, students, professionals exploring opportunities
- **System Admin**
 - **Roles:** Platform Administrator, Support, Content Moderator

4. Platform Overview

Role	Primary Actions
Employer	Post jobs, manage applicants, track

	progress, message candidates
Job Seeker	Create resume, apply for jobs, track applications
System Admin	User management, content moderation, platform analytics, system configuration

5. Core Modules

5.1 Authentication & User Roles

- Dual-path login/register
- **Role-based dashboards (Employer, Job Seeker, System Admin)**
- Password encryption & JWT authentication
- Social login (Google, or Twitter)
- If the user has Niajiri account they can login without having to register for ATS

5.2 Employer Module

- **Company Profile Creation:** Company name, size, industry, website, logo, contact info
- **Job Posting System:** Job title, description, responsibilities, requirements, salary range, location
- **Job Listing Management:** Edit, close, duplicate postings
- **Applicant Dashboard:** Resume preview, filter, tag, comment, rate, shortlist/reject, status management (New, In Review, Shortlisted, Rejected)
- **Notifications:** Email + in-app for new applicants and candidate updates

5.3 Job Seeker Module

- **Profile Setup:** Basic info, skills, education, experience
- **Resume Builder:** Auto-fill from uploads (CV parser), edit via UI, AI suggestions (bullet-point improvements, grammar, structure), **multiple resume version storage with diffing and export to PDF/Docx**
- **Job Discovery:** Filters: title, location, salary, company, tags, save job option
- **Application Submission:** Upload resume/cover letter OR use builder
- **Application Tracker:** Timeline: Applied → Viewed → Interviewed → Offer → Hired/Rejected
- **Notifications:** Job match alerts, status updates

5.4 System Admin Module

- **User Management:**
 - View, edit, deactivate, or delete user accounts (Employers and Job Seekers).
 - Reset passwords for users.
 - Assign/change user roles.
- **Content Moderation:**
 - Review and moderate reported content (e.g., inappropriate job postings, fake profiles, **reported messages**).
 - Approve or reject company profiles and job postings if required (optional, based on policy).
- **Platform Analytics:**
 - Access to comprehensive platform metrics (**MAUs, DAUs, churn, new registrations, jobs posted, application conversion, resume completion %, time-to-resolution for moderation**).
 - Generate custom reports.
- **Subscription & Billing Tracking:**
 - View and manage employer subscription plans and payment statuses.
 - Issue invoices/receipts (if applicable), **monitor renewal alerts and overdue payments**.
- **System Configuration:**
 - Manage global platform settings (e.g., notification templates, default filters).
 - Access system logs for troubleshooting.
- **Technical Support:**
 - View and respond to user support tickets.

5.5 Messaging Center

- **Direct messaging** between employer and shortlisted candidates.
- **Admin moderation panel** for reported messages (spam/offensive).
- **Template-based system** for bulk messages (interviews, rejections).

6. Role-Based Access Control (RBAC)

- **Granular permissions** defining what each role can view and do.

Role	Permissions Summary
Employer	Manage jobs, view applicants, message candidates
Job Seeker	Manage profiles, apply, view statuses
System Admin	Full access + audit logs, config, moderation, user management

7. UX & Interface Components

Component	Enhancement
Dual Login UI	Clear path: Employer vs Job Seeker
Admin Dashboard	Overview of system health, user activity, and moderation queues
Dashboard Cards	Visual breakdown (jobs posted / applicants / saved jobs / users)
Resume Builder Tool	Section-based editor, AI text suggestions, version differencing , export to PDF/Docx

Timeline Tracker	Step indicator for application status
Candidate Cards (Employer)	Compact view with tag, notes, actions
Notification Bell	App + Email alerts
Responsive Layout	Mobile-first + Web optimized (Flex/Grid design)
User Management Tables (Admin)	Filterable, searchable tables for user accounts with action buttons
Content Moderation Tools (Admin)	Interface to review and act on reported content
Accessibility Support	Screen reader support, color contrast compliance, keyboard navigation
Dark Mode Toggle	Improves UX for late-night users
Adaptive Design	Adjusts for slow connections, supports offline draft resume editing (PWA features)

8. Functional Requirements

8.1 Employer Functionalities

Feature	Description
Register/Login	Via email/password
Company Profile	Setup & Edit
Post Jobs	Job form + Preview
Manage Applicants	Search, filter, tag, comment, export

Status Tracking	New, In Review, Shortlisted, Rejected
Notifications	Alerts on new activity
Messaging	Direct messages with shortlisted candidates

8.2 Job Seeker Functionalities

Feature	Description
Register/Login	Via email/password
Profile Setup	Resume fields collection
Upload Resume	.pdf, .doc parsing with preview
Resume Builder	With editing, AI help, version control, and export
Job Search	Filtering with save & apply
Application Tracker	Visual timeline of all applications
Notifications	Status updates, job suggestions

8.3 System Admin Functionalities

Feature	Description
Admin Login	Dedicated secure login for System Admins.
User Account Management	View, edit, activate/deactivate, delete Employer and Job Seeker accounts.

Role Assignment	Ability to assign and change user roles.
Content Moderation	Review and manage reported jobs, profiles, comments, and messages .
Platform Analytics	Access dashboards for key metrics (users, jobs, applications, moderation trends, billing).
Billing & Subscription	Monitor and manage employer subscription statuses.
System Settings	Configure global platform parameters.
Support Ticket View	Access and manage user support inquiries.
Audit Log Review	View detailed logs of system and admin actions, including before/after diffs.

9. Non-Functional Requirements

Requirement	Details
Performance	SLA: 95th percentile API latency < 300ms , concurrent job seekers (1000+)
Scalability	Microservices-ready, scalable job feed & dashboard, Admin operations should not impact core user flows.
Security	JWT, granular RBAC , encryption for PII, MFA for admin, brute-force protection, IP blacklisting, content sanitation (XSS/SQLi prevention)
Availability	99.9% uptime with auto-scaling

SEO Optimization	For job detail pages (public links)
Audit Trails	Logging of all critical Admin actions for security and accountability, including before/after diffs and time-based access reports.
Disaster Recovery	RTO: 15 minutes, RPO: 5 minutes (Recovery Time Objective, Recovery Point Objective)
Multi-tenancy	Tenant-aware data isolation (e.g., by company, country if future scope dictates)
Logging	Centralized logging with Elasticsearch / Cloudwatch for all services.
Observability	Tracing with OpenTelemetry, Prometheus for metrics, Grafana for dashboards.

10. Security Enhancements

- **Enforce MFA for admin accounts.**
- **Brute-force protection and IP blacklisting.**
- **Content sanitation to prevent XSS and SQLi.**
- **Audit Trail Enhancements:**
 - Includes before/after diffs for data changes.
 - Time-based access reports (e.g., data exported by admin).

11. Database Schema

Tables:

- **Users** (id, name, email, password_hash, **role_id**, status, created_at, updated_at)
- **Roles** (id, name, description) - *New table for role management*
- **Permissions** (id, name, description) - *New table for granular admin permissions (e.g., can_delete_user, can_moderate_content)*
- **Role_Permissions** (role_id, permission_id) - *New pivot table*
- Companies (id, name, description, logo, industry, location, user_id)
- Jobs (id, title, description, salary, location, company_id, status, created_by_user_id)
- Applicants (id, user_id, job_id, resume_url, cover_letter, status, comments)
- Resumes (id, user_id, content_json, version_label, **file_path**)
- Notifications (id, user_id, type, content, is_read, timestamp)
- Application_Timeline (id, applicant_id, event, timestamp)
- **Reports** (id, reporter_user_id, reported_entity_type, reported_entity_id, reason, status, resolved_by_user_id, created_at) - *New table for content moderation*
- **System_Logs** (id, user_id, action, entity_type, entity_id, timestamp, ip_address, **old_value**, **new_value**) - *Enhanced table for audit trails*
- **Messages** (id, sender_id, receiver_id, content, timestamp, is_read, reported_status) - *New table for Messaging Center*
- **Message_Templates** (id, name, content, type) - *New table for Messaging Center templates*

12. Suggested Tech Stack

Layer	Technologies
Frontend	React.js, Tailwind CSS, Framer Motion
Backend	Python & Laravel REST Framework
Database	PostgreSQL
Resume Parsing	Python-based CV parser (e.g., spaCy, PyPDF2)
AI Resume Assistant	OpenAI GPT API + LangChain
Notifications	SendGrid (Email) , In-app alerts

Deployment	Docker, AWS
Storage	AWS S3
Auth	JWT, OAuth 2.0 (Google, LinkedIn, Twitter)
Logging & Monitoring	Elasticsearch (for centralized logs)
Business Analytics	Superset

13. Notification System

Split into three channels for better maintainability and UX:

- **Transactional:**
 - Job applied, Interview scheduled, Offer status, Password reset, Account verification.
- **Behavioral:**
 - Weekly job suggestions, Resume improvement tips, Saved job updates, Company follow-ups.
- **System Alerts (Admin):**
 - Spike in user reports, System failures, Login abuse, Payment failures, Subscription renewals.

Delivery via:

- **Email (SendGrid)**
- **In-app alerts**
- **Push (OneSignal)**

14. Application Status Flow

- **Visual Flow for Employers:**
 - New → Viewed → In Review → Shortlisted → Interviewed → Offer Made → Offer Accepted / Rejected
- **For Job Seekers:**

- Applied → Seen → Next Step (Interview/Offer) → Result
- **Admin visibility** into status progression and drop-off metrics for insights.

15. Testing Plan (Extended)

Type	Tools
Unit Tests	Jest
Integration Tests	Selenium
Load Testing	k6
Penetration Testing	OWASP ZAP
Usability Testing	Figma prototypes
CI/CD Pipeline	GitHub Actions w/ test coverage thresholds

16. Admin Analytics & Dashboards

- **Category:** Platform Usage
 - **Metrics:** MAUs, DAUs, churn, new registrations, active sessions.
- **Category:** Employer Metrics
 - **Metrics:** Jobs posted, conversion to applicants, average time to hire, popular job categories.
- **Category:** Job Seeker Flow
 - **Metrics:** Resume completion %, application success rates, drop-off points in application process, unique applicant count.
- **Category:** Moderation Logs
 - **Metrics:** Time-to-resolution for reports, flagged content trends, number of moderated items per admin.
- **Category:** Billing Dashboard
 - **Metrics:** Renewal alerts, overdue payments, receipts issued, revenue insights (if applicable)

applicable).

Tools: Superset

17. Device Compatibility

- Mobile First Design using responsive CSS (Tailwind)

18. Future Scope

Priority	Feature
High	AI-powered content moderation (ML/NLP-based classification)
Medium	BI Dashboard for comprehensive trend analysis (Superset)
Low	Candidate skill assessment integrations

19. Conclusion

The updated version 1.0 of the Niajiri ATS Technical Specification includes comprehensive support for administrative oversight, modular UI/UX improvements, security enhancements, and observability practices. These refinements aim to make the system **enterprise-ready**, with meticulous attention to both **scale and maintainability**. The addition of detailed non-functional requirements like Disaster Recovery and Multi-tenancy, alongside an expanded testing strategy, ensures a robust and resilient platform.