Tekboot

TalentCloud

Specifications document

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FUNCTIONAL SPECIFICATIONS DOCUMENT FOR CANDIDATE MANAGEMENT SOLUTION

A) INTRODUCTION

1) PURPOSE OF THE DOCUMENT

This document outlines the functional specifications for the Candidate Management Solution **TalentCloud** for a Belgian ESN. The system will streamline the recruitment process, candidate interactions, and client engagement. It will provide a comprehensive digital platform leveraging modern web technologies and cloud infrastructure to ensure efficient, secure, and scalable operations.

2) PROJECT SCOPE

The project aims to develop a web-based platform that enables:

- **Admins** to manage recruitment sessions, validate documents, schedule interviews, and process candidates through to visa approval.

- **Candidates** to create accounts, build profiles, enroll in continuous learning programs, and submit applications.

- **Clients** to publish job opportunities, evaluate candidates, manage recruitment campaigns, and provide feedback.

- **Global Admins** to define roles, activate/deactivate users, and enforce compliance policies.

3) TERMS, ACRONYMS & DEFINITIONS

- **ESN**: Entreprise de Services du Numérique

- **CI/CD**: Continuous Integration/Continuous Deployment

- **IAM**: Identity and Access Management

- **AI Matching**: AI-driven selection of candidates based on predefined criteria

1) SYSTEM OVERVIEW & ARCHITECTURE

The platform will be designed using a microservices architecture with modular services interacting via APIs. Key components include:

- **Frontend**: Angular SPA (Single Page Application)

- **Backend**: Spring Boot (Java 17+)

- **Database**: MySQL & MongoDB

- **Messaging & Events:** Kafka

- **Authentication & Security:** Keycloak

- **Cloud Infrastructure**: AWS

- **DevOps & CI/CD:** Docker, Kubernetes, GitHub Actions

- **Reporting & Automation:** Power BI & Power Automate

2) INTEGRATION REQUIREMENTS

- Integration with email services for notifications.

- OAuth authentication for secure user login.

- Integration with AI models for candidate-job matching.

- Data synchronization across SQL (MySQL) and NoSQL (MongoDB).

3) DEPENDENCIES & CHANGE IMPACTS

- External service dependencies (AWS, Power BI, Keycloak).

- Changes in recruitment policies affecting business logic.

- New feature integration may require API updates.

C) FUNCTIONAL SPECIFICATIONS

USE CASE ID – 1: USER AUTHENTICATION & AUTHORIZATION

Primary Actor(s): All Users

Stakeholders: Candidates, Admins, Clients, Global Admins

Trigger: User attempts to log in

Pre-conditions: User has valid credentials

Post-conditions: User is granted access based on assigned role

Main Success Scenario:

1. User enters email/password or uses Google/GitHub login.

2. System verifies credentials via Keycloak.

3. User is granted access based on predefined roles (Visitor, Admin, Candidate, Client).

Extensions: Invalid login attempts trigger account lockout after 5 tries.

Priority: High

USE CASE ID – 2: CANDIDATE PROFILE MANAGEMENT

Primary Actor(s): Candidate

Stakeholders: Candidates, Admins

Trigger: Candidate signs up or updates profile

Pre-conditions: Candidate has an active account

Post-conditions: Profile information is saved and can be accessed

Main Success Scenario:

1. Candidate provides personal details, skills, experience, and preferences.

2. Candidate can upload CV, certifications, and other documents.

3. System validates the input and stores data in MongoDB.

4. Candidates can subscribe to learning programs and track progress.

Priority: High

USE CASE ID – 3: RECRUITMENT SESSION MANAGEMENT

Primary Actor(s): Admin

Stakeholders: Admins, Candidates, Clients

Trigger: Admin creates or updates a recruitment session

Pre-conditions: Admin has sufficient privileges

Post-conditions: Recruitment session is visible to candidates

Main Success Scenario:

1. Admin defines job requirements, timeline, and candidate criteria.

2. Admin schedules interviews and assigns evaluators.

3. Candidates can submit applications.

4. Notifications are sent to registered candidates.

Priority: High

USE CASE ID – 4: CANDIDATE DOCUMENT UPLOAD & VERIFICATION

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins

Trigger: Candidate uploads required documents

Pre-conditions: Candidate has an active profile

Post-conditions: Documents are securely stored and verified

Main Success Scenario:

1. Candidate uploads resume, certifications, or identification.

2. System verifies document format and validity.

3. Admin reviews and approves or rejects documents.

4. Approved documents are linked to the candidate profile.

Priority: High

USE CASE ID – 5: INTERVIEW SCHEDULING

Primary Actor(s): Admin, Candidate

Stakeholders: Candidates, Admins

Trigger: Admin schedules an interview for a candidate

Pre-conditions: Candidate is part of an active recruitment session

Post-conditions: Interview is scheduled, and notifications are sent

Main Success Scenario:

1. Admin selects an available time slot for an interview.

2. Candidate receives notification and confirms participation.

3. System updates the recruitment session with interview details.

Priority: High

USE CASE ID – 6: AI-BASED CANDIDATE MATCHING

Primary Actor(s): System, Client

Stakeholders: Clients, Admins

Trigger: Client posts a job opportunity

Pre-conditions: Candidates have complete profiles

Post-conditions: Matched candidates are displayed based on AI algorithms

Main Success Scenario:

1. Client defines job criteria and posts an offer.

2. System runs AI-based matching based on skills, experience, and learning track.

3. Matching candidates are ranked and displayed to the client.

Priority: Medium

USE CASE ID – 7: LEARNING & CONTINUOUS IMPROVEMENT

Primary Actor(s): Candidate

Stakeholders: Candidates, Admins

Trigger: Candidate subscribes to a learning track

Pre-conditions: Candidate has an active account

Post-conditions: Learning progress is tracked, and scoring is updated

Main Success Scenario:

1. Candidate selects topics of interest.

2. System sends regular learning prompts via email and web notifications.

3. Candidate completes quizzes, coding tasks, or learning materials.

4. Learning history is stored and can be reviewed.

Priority: Medium

USE CASE ID – 8: CANDIDATE APPLICATION SUBMISSION

Primary Actor(s): Candidate

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate applies for an open job position

Pre-conditions: Candidate has an active profile and job listings are available

Post-conditions: Candidate's application is recorded and visible to recruiters

Main Success Scenario:

1. Candidate selects an open job position.

2. Candidate submits application along with required documents.

3. System notifies recruiters of the new application.

4. Application status is updated for tracking.

Priority: High

USE CASE ID – 9: CANDIDATE JOB OFFER MANAGEMENT

Primary Actor(s): Client, Admin

Stakeholders: Clients, Candidates, Admins

Trigger: Candidate receives a job offer from a client

Pre-conditions: Candidate has applied for a job and is selected by the client

Post-conditions: Candidate can accept or reject the job offer

Main Success Scenario:

1. Client reviews candidate applications and selects a candidate.

2. Client sends a job offer via the platform.

3. Candidate is notified and reviews the offer.

4. Candidate accepts or rejects the offer.

5. System updates the recruitment status.

Priority: High

USE CASE ID – 10: CANDIDATE INTERVIEW FEEDBACK SUBMISSION

Primary Actor(s): Interviewer, Admin

Stakeholders: Admins, Candidates, Clients

Trigger: Interviewer submits feedback after conducting an interview

Pre-conditions: Interview has been completed

Post-conditions: Candidate's profile is updated with interview feedback

Main Success Scenario:

1. Interviewer accesses interview feedback form.

2. Interviewer submits ratings and comments.

3. System updates candidate's profile with feedback.

4. Candidate and Admin are notified of the results.

Priority: Medium

USE CASE ID – 11: AUTOMATED CANDIDATE STATUS UPDATES

Primary Actor(s): System

Stakeholders: Candidates, Admins, Clients

Trigger: Change in candidate status within the recruitment process

Pre-conditions: Candidate is engaged in an active recruitment session

Post-conditions: Status is updated in real-time and visible to relevant stakeholders

Main Success Scenario:

1. Candidate completes an interview or assessment.

2. System updates recruitment status (e.g., "Interview Completed").

3. Notification is sent to relevant users.

4. Admins can override or modify the status.

Priority: High

USE CASE ID – 12: CANDIDATE CONTINUOUS LEARNING PROGRESS TRACKING

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Admins

Trigger: Candidate engages with learning resources

Pre-conditions: Candidate is subscribed to a learning track

Post-conditions: Progress is recorded and updated

Main Success Scenario:

1. Candidate selects a learning module.

2. Candidate completes assigned tasks or quizzes.

3. System updates learning progress.

4. Candidate receives recommendations based on performance.

Priority: Medium

USE CASE ID – 13: CANDIDATE PROFILE VISIBILITY SETTINGS

Primary Actor(s): Candidate

Stakeholders: Candidates, Clients

Trigger: Candidate adjusts profile visibility settings

Pre-conditions: Candidate has an active profile

Post-conditions: Profile visibility is updated accordingly

Main Success Scenario:

1. Candidate accesses profile settings.

2. Candidate toggles visibility preferences (public, private, restricted).

3. System updates visibility settings.

4. Clients and recruiters see or are restricted from viewing the profile based on settings.

Priority: Low

USE CASE ID – 14: CANDIDATE CHAT & COMMUNICATION MODULE

Primary Actor(s): Candidate, Client, Admin

Stakeholders: Candidates, Clients, Admins

Trigger: User initiates or responds to a chat message

Pre-conditions: User is logged in and has permissions to communicate

Post-conditions: Message is delivered and stored for future reference

Main Success Scenario:

1. Candidate or Client initiates a conversation.

2. System delivers the message.

3. User receives and reads the message.

4. System archives chat history.

Priority: Medium

USE CASE ID – 15: CANDIDATE REFERENCE CHECK PROCESS

Primary Actor(s): Admin, Client

Stakeholders: Clients, Candidates

Trigger: Client requests a reference check for a candidate

Pre-conditions: Candidate has provided references

Post-conditions: Reference check feedback is recorded

Main Success Scenario:

1. Client initiates a reference check request.

2. System sends an automated request to the provided reference contacts.

3. Reference contacts submit feedback.

4. System updates candidate profile with the reference check results.

Priority: Medium

USE CASE ID – 16: RECRUITMENT ANALYTICS DASHBOARD

Primary Actor(s): Admin

Stakeholders: Admins, Clients

Trigger: Admin accesses analytics dashboard

Pre-conditions: Sufficient recruitment data is available

Post-conditions: Admin gains insights on recruitment trends

Main Success Scenario:

1. Admin navigates to the analytics dashboard.

2. System loads real-time recruitment metrics.

3. Admin filters and exports relevant reports.

Priority: High

USE CASE ID – 17: MULTI-LANGUAGE SUPPORT FOR PLATFORM

Primary Actor(s): System, Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: User selects a preferred language

Pre-conditions: System supports multiple languages

Post-conditions: User interface updates accordingly

Main Success Scenario:

1. User accesses language settings.

2. User selects a preferred language.

3. System updates the UI and text accordingly.

4. System saves language preferences.

Priority: Medium

USE CASE ID – 18: TWO-FACTOR AUTHENTICATION (2FA) FOR SECURE LOGIN

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: User enables 2FA for added security

Pre-conditions: User has an active account

Post-conditions: Login requires additional authentication step

Main Success Scenario:

1. User navigates to security settings.

2. User enables 2FA and selects authentication method (SMS, Authenticator app).

3. System verifies 2FA setup and activates security layer.

4. Future logins require an additional verification step.

Priority: High

USE CASE ID – 19: CANDIDATE PROFILE RECOMMENDATIONS

Primary Actor(s): System

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate updates profile information or a new job listing is added

Pre-conditions: Candidate has a completed profile

Post-conditions: System suggests relevant job opportunities

Main Success Scenario:

1. Candidate updates profile with new skills or experience.

2. System analyzes the profile and matches it with available job listings.

3. System sends recommendations to the candidate.

4. Candidate applies for suggested positions.

Priority: Medium

USE CASE ID – 20: CLIENT JOB POSTING MANAGEMENT

Primary Actor(s): Client

Stakeholders: Clients, Admins, Candidates

Trigger: Client creates or updates a job listing

Pre-conditions: Client has an active account and is authorized to post jobs

Post-conditions: Job listing is available for candidates

Main Success Scenario:

1. Client navigates to the job posting section.

2. Client fills in job details, requirements, and deadlines.

3. System validates and publishes the job post.

4. Candidates can view and apply.

Priority: High

USE CASE ID – 21: CANDIDATE INTERVIEW RESCHEDULING

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate or Admin requests to reschedule an interview

Pre-conditions: A scheduled interview exists

Post-conditions: Interview is rescheduled, and relevant users are notified

Main Success Scenario:

1. Candidate requests to reschedule the interview.

2. Admin reviews and approves the request.

3. System updates the schedule and notifies stakeholders.

Priority: Medium

USE CASE ID – 22: CANDIDATE DOCUMENT EXPIRY NOTIFICATION

Primary Actor(s): System

Stakeholders: Candidates, Admins

Trigger: A required document is about to expire

Pre-conditions: Candidate has uploaded documents with an expiration date

Post-conditions: Candidate is notified to renew documents

Main Success Scenario:

1. System checks document expiration dates.

2. Candidate is notified in advance.

3. Candidate uploads a renewed document.

4. System validates and updates the records.

Priority: Medium

USE CASE ID – 23: CANDIDATE INTERVIEW CONFIRMATION REMINDER

Primary Actor(s): System

Stakeholders: Candidates, Admins, Clients

Trigger: Scheduled interview approaching

Pre-conditions: Interview is scheduled in the system

Post-conditions: Candidate and interviewer receive reminders

Main Success Scenario:

1. System checks upcoming interviews.

2. System sends reminders to participants.

3. Candidate confirms attendance.

4. Interviewer prepares accordingly.

Priority: High

USE CASE ID – 24: CANDIDATE CERTIFICATION TRACKING

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins

Trigger: Candidate adds a certification to profile

Pre-conditions: Certification details must be valid

Post-conditions: Certification is recorded and validated

Main Success Scenario:

1. Candidate uploads certification details.

2. System verifies the certification.

3. Certification is linked to candidate profile.

4. Expiry notifications are set if applicable.

Priority: Medium

USE CASE ID – 25: CANDIDATE EXPERIENCE HISTORY LOGGING

Primary Actor(s): Candidate

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate updates job history

Pre-conditions: Candidate has an active profile

Post-conditions: Experience details are logged and visible to recruiters

Main Success Scenario:

1. Candidate adds new job experience.

2. System validates and records the details.

3. Recruiters can review experience history.

Priority: Medium

USE CASE ID – 26: CANDIDATE LEARNING COMPLETION BADGE

Primary Actor(s): System, Candidate

Stakeholders: Candidates, Admins

Trigger: Candidate completes a learning program

Pre-conditions: Candidate has engaged with the learning module

Post-conditions: Candidate receives a digital badge

Main Success Scenario:

1. Candidate completes required learning activities.

2. System awards a completion badge.

3. Badge is displayed on the candidate's profile.

4. Candidate can share badge on external platforms.

Priority: Low

USE CASE ID – 27: AI-BASED JOB FIT SCORING

Primary Actor(s): System

Stakeholders: Clients, Candidates, Admins

Trigger: Candidate applies for a job

Pre-conditions: Candidate profile contains sufficient data

Post-conditions: System assigns a job fit score

Main Success Scenario:

1. System analyzes candidate's skills and job requirements.

2. System calculates a job fit

3. System calculates a job fit score.

4. Recruiters and candidates can view the job fit percentage.

Priority: High

USE CASE ID – 28: AUTOMATED CANDIDATE RANKING FOR CLIENTS

Primary Actor(s): System

Stakeholders: Clients, Admins

Trigger: Clients search for candidates

Pre-conditions: Candidates have completed profiles and job criteria are defined

Post-conditions: Candidates are ranked based on AI scoring

Main Success Scenario:

1. Client enters job criteria.

2. System filters and ranks candidates based on skills, experience, and AI match score.

3. Client reviews ranked candidates.

4. System updates rankings dynamically as new candidates apply.

Priority: High

USE CASE ID – 29: CANDIDATE ONBOARDING PROCESS AUTOMATION

Primary Actor(s): Admin, Candidate

Stakeholders: Candidates, Admins

Trigger: Candidate accepts a job offer

Pre-conditions: Candidate has an active offer from a client

Post-conditions: Candidate completes onboarding steps

Main Success Scenario:

1. System generates onboarding checklist for candidate.

2. Candidate uploads required documents.

3. Admin verifies and approves documents.

4. Candidate receives confirmation of successful onboarding.

Priority: High

USE CASE ID – 30: VISA PROCESSING AND TRACKING

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate requires a visa for employment

Pre-conditions: Candidate has accepted a job offer requiring visa sponsorship

Post-conditions: Visa status is tracked and updated in real time

Main Success Scenario:

1. Candidate submits visa application documents.

2. System tracks visa processing stages.

3. Candidate and Admin receive status updates.

4. Visa approval is recorded, and candidate is notified.

Priority: High

USE CASE ID – 31: CLIENT SUBSCRIPTION AND BILLING MANAGEMENT

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins

Trigger: Client subscribes to recruitment services

Pre-conditions: Subscription plans exist for different levels of service

Post-conditions: Subscription is activated, and billing records are maintained

Main Success Scenario:

1. Client selects a subscription plan.

2. System processes payment and activates plan.

3. Client gains access to premium recruitment features.

4. System generates invoices and tracks billing history.

Priority: Medium

USE CASE ID – 32: CANDIDATE REFERRAL PROGRAM

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins

Trigger: Candidate refers another user to the platform

Pre-conditions: Candidate has an active account

Post-conditions: Referred user joins the platform, and referrer receives benefits

Main Success Scenario:

1. Candidate generates referral link.

2. New user signs up using the link.

3. System validates referral and assigns incentives.

4. Candidate and referred user receive confirmation.

Priority: Low

USE CASE ID – 33: RECRUITMENT CAMPAIGN PERFORMANCE ANALYTICS

Primary Actor(s): Admin

Stakeholders: Admins, Clients

Trigger: Admin evaluates the effectiveness of recruitment campaigns

Pre-conditions: Recruitment campaigns have been active for a period

Post-conditions: Performance insights are generated

Main Success Scenario:

1. Admin selects recruitment campaign for analysis.

2. System compiles success metrics (applications, hires, time-to-hire, etc.).

3. Reports are generated with actionable insights.

4. Admin refines future recruitment strategies based on data.

Priority: Medium

USE CASE ID – 34: JOB OFFER NEGOTIATION FEATURE

Primary Actor(s): Candidate, Client

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate wishes to negotiate job offer terms

Pre-conditions: Candidate has received a job offer

Post-conditions: Offer is updated and finalized

Main Success Scenario:

1. Candidate requests modifications to job offer.

2. Client reviews and makes adjustments if needed.

3. Negotiation continues until an agreement is reached.

4. System updates final offer details and logs changes.

Priority: Medium

USE CASE ID – 35: CANDIDATE EXIT FEEDBACK COLLECTION

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate leaves a job position

Pre-conditions: Candidate has completed an assignment

Post-conditions: Feedback is collected and analyzed

Main Success Scenario:

1. Candidate receives exit feedback form.

2. Candidate submits feedback on job experience.

3. System compiles reports for recruiters.

4. Admin reviews trends and improves future engagements.

Priority: Low

USE CASE ID – 36: MULTI-USER COLLABORATION FOR CLIENTS

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins

Trigger: Multiple client users collaborate on hiring

Pre-conditions: Client account supports multiple authorized users

Post-conditions: Users can share, review, and approve recruitment decisions

Main Success Scenario:

1. Admin assigns multi-user access to client accounts.

2. Users collaborate on job postings, applications, and feedback.

3. System tracks and records actions for transparency.

4. System prevents conflicts with role-based permissions.

Priority: Medium

USE CASE ID – 37: GDPR COMPLIANCE & CANDIDATE DATA MANAGEMENT

Primary Actor(s): System, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate requests data deletion or privacy controls

Pre-conditions: Candidate has personal data stored in the system

Post-conditions: Data is handled per GDPR compliance rules

Main Success Scenario:

1. Candidate accesses data privacy settings.

2. Candidate requests data deletion or updates.

3. System processes request and ensures compliance.

4. Candidate receives confirmation of data action.

Priority: High

USE CASE ID – 38: CANDIDATE BEHAVIORAL INSIGHTS & ENGAGEMENT TRACKING

Primary Actor(s): System, Admin

Stakeholders: Admins, Clients

Trigger: Admin evaluates candidate engagement trends

Pre-conditions: Candidate has interacted with the platform over time

Post-conditions: Insights on candidate activity are available

Main Success Scenario:

1. System monitors candidate interactions (applications, messages, learning modules, etc.).

2. Reports highlight engagement trends and drop-off points.

3. Admin adjusts platform features to improve retention.

Priority: Low

USE CASE ID – 39: CANDIDATE JOB PREFERENCES & ALERTS

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Admins

Trigger: Candidate updates job preferences

Pre-conditions: Candidate has an active profile

Post-conditions: System sends relevant job alerts

Main Success Scenario:

1. Candidate selects preferred job roles, locations, and industries.

2. System stores preferences and scans for matching job postings.

3. System sends notifications when new relevant jobs are posted.

4. Candidate applies directly from the alert.

Priority: Medium

USE CASE ID – 40: CANDIDATE CUSTOMIZABLE NOTIFICATION SETTINGS

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Admins

Trigger: Candidate modifies notification preferences

Pre-conditions: Candidate has an active account

Post-conditions: System updates notifications based on user choices

Main Success Scenario:

1. Candidate navigates to notification settings.

2. Candidate enables or disables specific notifications (e.g., job alerts, messages, interview reminders).

3. System updates and applies the preferences.

4. Notifications are adjusted accordingly.

Priority: Low

USE CASE ID – 41: CANDIDATE APPLICATION WITHDRAWAL

Primary Actor(s): Candidate

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate decides to withdraw a job application

Pre-conditions: Candidate has submitted an application

Post-conditions: Application is removed from active consideration

Main Success Scenario:

1. Candidate navigates to their submitted applications.

2. Candidate selects an application and chooses to withdraw.

3. System confirms withdrawal and updates job listing.

4. Admins and clients are notified of the withdrawal.

Priority: Medium

USE CASE ID – 42: CANDIDATE BOOKMARKING FAVORITE JOBS

Primary Actor(s): Candidate

Stakeholders: Candidates

Trigger: Candidate bookmarks job postings

Pre-conditions: Job postings are available

Post-conditions: Candidate can access bookmarked jobs later

Main Success Scenario:

1. Candidate browses job postings.

2. Candidate clicks the 'Bookmark' option.

3. System saves the bookmarked job to the candidate's profile.

4. Candidate accesses saved jobs later for quick application.

Priority: Low

USE CASE ID – 43: AI-POWERED RESUME PARSING & AUTOFILL

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Admins

Trigger: Candidate uploads a resume

Pre-conditions: Candidate has an active profile

Post-conditions: System extracts key information and autofills profile fields

Main Success Scenario:

1. Candidate uploads a resume in supported formats.

2. System scans the document and extracts details (skills, experience, education).

3. System autofills profile sections.

4. Candidate reviews and makes necessary adjustments.

Priority: High

USE CASE ID – 44: CLIENT TALENT PIPELINE MANAGEMENT

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins

Trigger: Client creates a talent pipeline for future hiring needs

Pre-conditions: Client has an active subscription

Post-conditions: Pipeline candidates are tracked and managed

Main Success Scenario:

1. Client defines job roles and creates a talent pipeline.

2. System identifies and tracks potential candidates.

3. Candidates receive notifications about future opportunities.

4. Client selects and contacts candidates when hiring opens.

Priority: Medium

USE CASE ID – 45: MULTI-STEP APPLICATION PROCESS

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate applies for a job with multiple screening stages

Pre-conditions: Job listing has multiple application steps

Post-conditions: Candidate progresses through steps systematically

Main Success Scenario:

1. Candidate applies for a job with multiple evaluation stages.

2. System tracks progress through stages (resume screening, technical test, interview, final decision).

3. Candidate receives updates on each stage.

4. Candidate completes required steps for final hiring decision.

Priority: High

USE CASE ID – 46: AI-BASED SALARY BENCHMARKING FOR JOBS

Primary Actor(s): System, Candidate, Client

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate or client requests salary insights

Pre-conditions: System has salary data available

Post-conditions: Candidates and clients receive insights on competitive salaries

Main Success Scenario:

1. Candidate or client accesses the salary benchmarking feature.

2. System retrieves market data for the role.

3. System displays salary trends based on location, experience, and industry.

4. Users adjust expectations or offers accordingly.

Priority: Medium

USE CASE ID – 47: AUTOMATED FOLLOW-UP MESSAGES FOR CLIENTS

Primary Actor(s): System

Stakeholders: Clients, Admins

Trigger: Candidate applies for a job, but no response is given within a set period

Pre-conditions: Candidate has submitted an application

Post-conditions: Client is reminded to take action

Main Success Scenario:

1. System tracks client responses to candidate applications.

2. If no action is taken within a specific timeframe, system sends a reminder.

3. Client reviews pending applications and responds.

4. System logs follow-up interactions.

Priority: Medium

USE CASE ID – 48: CANDIDATE SOFT SKILL ASSESSMENT TOOL

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate undergoes a soft skills assessment

Pre-conditions: Candidate opts in for assessment

Post-conditions: Results are shared with clients

Main Success Scenario:

1. Candidate selects soft skills assessment module.

2. System administers test (e.g., communication, leadership, adaptability).

3. Candidate receives a score and insights.

4. Results are added to candidate profile and shared with recruiters.

Priority: Medium

USE CASE ID – 49: CANDIDATE PERFORMANCE REVIEW & RATING

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins, Candidates

Trigger: Candidate completes a job assignment

Pre-conditions: Candidate has worked with a client

Post-conditions: Performance feedback is recorded

Main Success Scenario:

1. Client accesses candidate performance review section.

2. Client provides feedback based on job performance.

3. System stores ratings and comments.

4. Admins can review and aggregate feedback for future reference.

Priority: Medium

USE CASE ID – 50: CANDIDATE SKILL ENDORSEMENT BY CLIENTS

Primary Actor(s): Client, Admin

Stakeholders: Clients, Candidates, Admins

Trigger: Client endorses candidate's specific skills

Pre-conditions: Candidate has demonstrated skills while working with a client

Post-conditions: Endorsements are recorded in the candidate profile

Main Success Scenario:

1. Client selects a candidate they have worked with.

2. Client endorses specific skills (e.g., Java, Data Analysis, Leadership).

3. Endorsements appear on the candidate's profile.

4. System validates authenticity before publishing endorsements.

Priority: Medium

USE CASE ID – 51: INTERNAL MESSAGING BETWEEN CANDIDATES & CLIENTS

Primary Actor(s): Candidate, Client

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate or Client initiates a conversation

Pre-conditions: Both users have active accounts

Post-conditions: Messages are securely stored and accessible

Main Success Scenario:

1. Candidate or client sends a message via internal chat.

2. System securely delivers the message.

3. Recipient receives a notification and reads the message.

4. System archives the chat for future reference.

Priority: High

USE CASE ID – 52: CANDIDATE APPLICATION DEADLINE REMINDER

Primary Actor(s): System

Stakeholders: Candidates, Admins

Trigger: Application deadline is approaching

Pre-conditions: Candidate has an incomplete or pending application

Post-conditions: Candidate is reminded to complete the application

Main Success Scenario:

1. System detects upcoming deadlines.

2. System sends reminders to candidates.

3. Candidate completes the application before the deadline.

4. System confirms submission.

Priority: High

USE CASE ID – 53: CANDIDATE WORK EXPERIENCE VALIDATION

Primary Actor(s): Admin, Candidate

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate submits work experience details

Pre-conditions: Candidate has added past jobs to profile

Post-conditions: Experience is verified and validated

Main Success Scenario:

1. Candidate enters work experience details.

2. System verifies details via reference checks or API integrations.

3. Admin reviews and approves/rejects the experience.

4. Validated experience is displayed on candidate profile.

Priority: Medium

USE CASE ID – 54: MULTI-ROLE USER ACCOUNT MANAGEMENT

Primary Actor(s): Admin

Stakeholders: Candidates, Clients, Admins

Trigger: User needs multiple roles on the platform

Pre-conditions: User has an active account

Post-conditions: User can switch roles seamlessly

Main Success Scenario:

1. Admin grants multiple roles (e.g., Candidate & Client) to a user.

2. User switches between roles via a dashboard.

3. System adjusts permissions accordingly.

4. User accesses role-specific features.

Priority: High

USE CASE ID – 55: REAL-TIME COLLABORATION ON JOB LISTINGS

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins

Trigger: Multiple users need to collaborate on a job listing

Pre-conditions: Client account supports multiple authorized users

Post-conditions: Real-time collaboration is enabled

Main Success Scenario:

1. Multiple recruiters work on the same job posting.

2. System tracks and syncs updates in real-time.

3. Users leave comments and edits collaboratively.

4. Admin finalizes and publishes the listing.

Priority: Medium

USE CASE ID – 56: AUTOMATIC CANDIDATE SHORTLISTING FOR CLIENTS

Primary Actor(s): System

Stakeholders: Clients, Admins

Trigger: Job applications reach a defined threshold

Pre-conditions: Candidates have applied for a job listing

Post-conditions: System filters top candidates for review

Main Success Scenario:

1. System analyzes applications based on predefined criteria.

2. Shortlisted candidates are ranked.

3. Clients receive recommended candidates.

4. System updates status for reviewed candidates.

Priority: High

USE CASE ID – 57: GDPR DATA DELETION REQUEST HANDLING

Primary Actor(s): Candidate, Admin

Stakeholders: Candidates, Admins

Trigger: Candidate requests personal data deletion

Pre-conditions: Candidate has stored data in the system

Post-conditions: Data is erased in compliance with GDPR

Main Success Scenario:

1. Candidate submits a data deletion request.

2. Admin reviews and confirms request validity.

3. System securely deletes candidate's data.

4. Candidate receives confirmation of deletion.

Priority: High

USE CASE ID – 58: JOB RECOMMENDATION ENGINE BASED ON MACHINE LEARNING

Primary Actor(s): System

Stakeholders: Candidates, Clients, Admins

Trigger: Candidate searches for jobs or updates profile

Pre-conditions: Machine learning model is trained with historical data

Post-conditions: Personalized job recommendations are displayed

Main Success Scenario:

1. System analyzes candidate behavior and preferences.

2. System applies ML algorithms to suggest relevant jobs.

3. Candidate receives personalized job recommendations.

4. Candidate applies for suggested roles.

Priority: High

USE CASE ID – 59: RECRUITMENT WORKFLOW CUSTOMIZATION FOR CLIENTS

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins

Trigger: Client requires a custom hiring workflow

Pre-conditions: Recruitment workflows are configurable

Post-conditions: Clients customize hiring processes

Main Success Scenario:

1. Client selects a hiring workflow template.

2. Client customizes interview stages and assessments.

3. System applies the workflow to relevant job postings.

4. Candidates progress through the customized pipeline.

Priority: Medium

USE CASE ID – 60: CANDIDATE INTERVIEW PREPARATION ASSISTANCE

Primary Actor(s): Candidate, System

Stakeholders: Candidates, Admins

Trigger: Candidate is invited for an interview

Pre-conditions: Interview details are available

Post-conditions: Candidate receives preparation guidance

Main Success Scenario:

1. Candidate receives interview invite.

2. System suggests preparation resources (e.g., sample questions, tips).

3. Candidate reviews and prepares accordingly.

4. Candidate attends interview confidently.

Priority: Medium

USE CASE ID – 61: CANDIDATE INTERVIEW RESCHEDULE BY CLIENT

Primary Actor(s): Client, Candidate, Admin

Stakeholders: Clients, Candidates, Admins

Trigger: Client requests rescheduling of a candidate interview

Pre-conditions: Candidate interview is scheduled

Post-conditions: New interview date is set

Main Success Scenario:

1. Client initiates rescheduling request.

2. Candidate receives notification of proposed new date.

3. Candidate confirms or requests an alternative date.

4. System updates the interview schedule.

Priority: Medium

USE CASE ID – 62: AI-POWERED CANDIDATE VIDEO INTERVIEW ANALYSIS

Primary Actor(s): System, Candidate

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate records a video interview

Pre-conditions: Candidate has a scheduled video interview

Post-conditions: AI analyzes responses and body language

Main Success Scenario:

1. Candidate records video responses.

2. AI analyzes tone, sentiment, and facial expressions.

3. System generates insights for recruiter review.

4. Recruiter receives AI-enhanced candidate evaluation.

Priority: High

USE CASE ID – 63: CANDIDATE INTERVIEW SCORECARD

Primary Actor(s): Client, Admin

Stakeholders: Clients, Admins, Candidates

Trigger: Client evaluates candidate after an interview

Pre-conditions: Candidate has attended an interview

Post-conditions: Scorecard is saved and accessible for decision-making

Main Success Scenario:

1. Client selects interview scorecard.

2. Client rates candidate based on predefined evaluation criteria.

3. Scores are compiled and recorded.

4. Client uses scorecard for final hiring decisions.

Priority: High

USE CASE ID – 64: AUTO-SUGGESTION OF MISSING PROFILE INFORMATION

Primary Actor(s): System, Candidate

Stakeholders: Candidates, Admins

Trigger: Candidate profile is incomplete

Pre-conditions: Candidate profile lacks necessary details

Post-conditions: System suggests missing details for completion

Main Success Scenario:

1. System detects missing profile fields.

2. System prompts candidate with recommendations.

3. Candidate fills in missing information.

4. System validates and updates profile completion status.

Priority: Medium

USE CASE ID – 65: CANDIDATE VISA PROCESSING TIMELINE ESTIMATION

Primary Actor(s): System, Candidate, Admin

Stakeholders: Candidates, Admins, Clients

Trigger: Candidate applies for visa processing

Pre-conditions: Candidate requires a work visa

Post-conditions: System provides estimated processing time

Main Success Scenario:

1. Candidate submits visa application documents.

2. System calculates estimated processing timeline based on historical data.

3. Candidate receives timeline estimate.

4. System updates timeline if any delays occur.

Priority: High

USE CASE ID – 66: AI-BASED RECRUITMENT TREND ANALYSIS

Primary Actor(s): System, Admin

Stakeholders: Admins, Clients

Trigger: Admin requests recruitment trend insights

Pre-conditions: Sufficient recruitment data is available

Post-conditions: AI generates insights into hiring patterns

Main Success Scenario:

1. Admin accesses recruitment trend dashboard.

2. AI analyzes hiring trends, success rates, and drop-offs.

3. Admin reviews insights to optimize recruitment strategies.

4. System continuously updates trend analysis.

Priority: Medium

USE CASE ID – 67: AUTO-GENERATED CONTRACT FOR CANDIDATES

Primary Actor(s): System, Client, Candidate

Stakeholders: Clients, Candidates, Admins

Trigger: Candidate is selected for a job

Pre-conditions: Client and candidate agree on terms

Post-conditions: System generates a contract for electronic signing

Main Success Scenario:

1. Client finalizes offer with the candidate.

2. System generates a contract based on selected job parameters.

3. Candidate and client sign electronically.

4. System stores contract securely.

Priority: High

USE CASE ID – 68: TWO-STEP VERIFICATION FOR ADMIN ACTIONS

Primary Actor(s): Admin, System

Stakeholders: Admins

Trigger: Admin attempts a critical system action

Pre-conditions: System requires secure verification

Post-conditions: Two-step verification is completed successfully

Main Success Scenario:

1. Admin attempts to make a critical change (e.g., deleting user accounts).

2. System prompts for secondary authentication (e.g., OTP via email/SMS).

3. Admin completes verification.

4. Action is executed securely.

Priority: High

USE CASE ID – 69: CANDIDATE DIGITAL PORTFOLIO SHOWCASE

Primary Actor(s): Candidate

Stakeholders: Candidates, Clients

Trigger: Candidate uploads portfolio items

Pre-conditions: Candidate has relevant project work

Post-conditions: Portfolio is visible to recruiters

Main Success Scenario:

1. Candidate uploads project samples, certifications, and references.

2. System organizes the portfolio for optimal display.

3. Recruiters access candidate portfolio.

4. Candidate receives engagement insights on portfolio views.

Priority: Medium

USE CASE ID – 70: ADVANCED FILTERING AND SEARCH FOR CLIENTS

Primary Actor(s): Client

Stakeholders: Clients, Admins

Trigger: Client searches for candidates

Pre-conditions: Multiple candidate profiles exist in the system

Post-conditions: Client finds the most relevant candidates

Main Success Scenario:

1. Client accesses advanced search panel.

2. Client applies multiple filters (e.g., years of experience, skills, location).

3. System retrieves and ranks results dynamically.

4. Client saves search preferences for future use.

Priority: High

D) STRATEGIC ROADMAP FOR DEVELOPMENT AND DEPLOYMENT

This roadmap outlines the key phases for the Candidate Management System, ensuring a structured and timely execution. The development process spans 5 months, focusing on system initiation, development, testing, deployment, and optimization. Each phase aligns with defined deliverables and project milestones.

PROJECT INITIATION & REQUIREMENTS ANALYSIS (MONTH 1 - SPRINT 1 & 2)

- Supplier and Stakeholder Agreement: Finalization of vendor selection, partner agreements, and project goals.

- Kick-Off Meeting: Defining roles, responsibilities, expectations, and collaboration framework.

- Detailed Requirement Analysis: Functional and non-functional requirements are refined, mapped to use cases, and validated by stakeholders.

- Technology Stack Finalization: Confirmation of Spring Boot, Angular, AWS, Keycloak, Kafka, Docker, Kubernetes, Power BI, and relevant security standards.

- Backlog Creation & Sprint Planning: Structuring backlog items and sprint allocations.

- System Architecture & Infrastructure Setup: Cloud resources on AWS, database schemas, microservices, and core integrations are established.

SYSTEM DESIGN AND DEVELOPMENT PHASE (MONTH 2-3 - SPRINT 3 TO SPRINT 6)

- **System Blueprint & API Design: Finalized application blueprint including REST & GraphQL APIs.**

- **Candidate & Client Modules:**

  - Profile Management: Registration, authentication, role management.

  - Document Management: File uploads, verification, tracking expiration dates.

  - AI Matching & Job Posting: Smart filtering and recommendations.

- **Recruitment Workflow & Scheduling:**

  - Interview Scheduling System with rescheduling, reminders, and scoring mechanisms.

  - Automated Contract Generation & E-signatures.

  - Visa Process Tracking & Notifications.

- **Security and Compliance:**

  - Role-Based Access Control (RBAC) implementation.

  - GDPR-compliant candidate data management and deletion.

  - Multi-Factor Authentication (MFA) and Audit Logs.

- **Initial Testing Frameworks:**

  - Unit Tests for backend microservices.

  - Integration Tests between frontend and backend.

  - Load Testing on Database Queries & Cloud Deployments.

FEATURE EXPANSION & SYSTEM OPTIMIZATION (MONTH 4 - SPRINT 7 & 8)

- **Communication & Collaboration Features:**

  - Real-time Chat System between candidates, clients, and admins.

  - Automated Email & Web Notifications.

  - Multi-user Client Collaboration on Recruitment.

- **Candidate Engagement & Learning:**

  - AI-Driven Learning Modules & Progress Tracking.

  - Skill-based Candidate Ranking & Assessment Tools.

  - Gamification for Continuous Improvement & Certifications.

- **Data Insights & Analytics:**

  - Recruitment Dashboards in Power BI.

  - AI-driven Recruitment Trend Analysis.

  - Client Performance Metrics for Hiring Processes.

- Codebase Optimization & Performance Tuning:

  - Caching Strategies for Faster Data Retrieval.

  - Database Optimization for Large-Scale Searches.

  - Security Hardening & Vulnerability Assessments.

QUALITY ASSURANCE & DEPLOYMENT PREPARATION (MONTH 5 - SPRINT 9 & 10)

- **Final System-wide Testing:**

  - End-to-End Functional Testing.

  - Security Penetration Testing & Compliance Validation.

  - User Acceptance Testing (UAT) with Stakeholders.

- **Deployment Readiness:**

  - Load Balancing & Kubernetes Auto-scaling Setup.

  - Automated CI/CD Pipelines on GitHub Actions.

  - Multi-Region Deployment & Failover Configuration.

- **Final System Review & Documentation:**

  - Training Material & User Guides for End-users.

  - Operational Handbook for IT Support Teams.

  - Official Go-Live Decision & Final Review.

PRODUCTION DEPLOYMENT & POST-IMPLEMENTATION SUPPORT (FINAL WEEKS)

- **Full System Deployment on AWS Cloud:**

  - Containerized Microservices Live on Kubernetes.

  - Database Migration & Backup Policies Activated.

- **Monitoring & Incident Management:**

  - Live Performance Monitoring & Alerting Systems.

  - Bug Fixing & Rapid Patching of Issues.

- **Project Closure & Future Enhancements:**

  - Project Review on Deliverables & Success Metrics.

  - Stakeholder Feedback & Lessons Learned.

  - Plan for Continuous Improvement & Future Roadmap.

The following backlog distributes system requirements into 10 sprints (2 weeks per sprint), each tracking features to be developed. Each ticket references a relevant Use Case ID.

SPRINT 1: SYSTEM FOUNDATION & AUTHENTICATION

Ticket ID	Description	Use Case ID	Priority
S1-T1	Set up system architecture (Spring Boot, Angular, AWS)	-	High
S1-T2	Implement Keycloak authentication & role management	1	High
S1-T3	User registration and login with JWT	1	High
S1-T4	Multi-factor authentication for admins	68	High
S1-T5	User profile creation and settings management	2	High

SPRINT 2: CANDIDATE PROFILE & DOCUMENT MANAGEMENT

Ticket ID	Description	Use Case ID	Priority
S2-T1	Implement profile editing and file upload	2,4	High
S2-T2	AI-assisted profile completion	64	Medium
S2-T3	Document verification and storage	5	High
S2-T4	Expiry notifications for required documents	22	Medium
S2-T5	Candidate digital portfolio showcase	69	Medium

SPRINT 3: JOB POSTING & CANDIDATE MATCHING

Ticket ID	Description	Use Case ID	Priority
S3-T1	Implement client job posting system		20	High
S3-T2	AI-based candidate-job matching	6,67	High

Ticket ID	Description	Use Case ID	Priority
S3-T3	Customizable candidate search filters	70	High
S3-T4	AI-powered resume parsing and autofill	43	Medium
S3-T5	Automated job recommendations for candidates	58	High

SPRINT 4: INTERVIEW MANAGEMENT

Ticket ID	Description	Use Case ID	Priority
S4-T1	Interview scheduling system	5,21	High
S4-T2	Interview rescheduling by client or candidate	61	Medium
S4-T3	Candidate interview reminders	23	High
S4-T4	AI-powered video interview analysis	62	High
S4-T5	Candidate interview scorecard	63	Medium

SPRINT 5: CANDIDATE ASSESSMENT & LEARNING

Ticket ID	Description	Use Case ID	Priority
S5-T1	Candidate skill testing and assessment module	48	Medium
S5-T2	Soft skill and behavioral assessment		Medium
S5-T3	Learning progress tracking for candidates		Medium
S5-T4	Candidate certification tracking		Medium
S5-T5	Automated learning suggestions based on role preferences		Medium

SPRINT 6: RECRUITMENT WORKFLOW & CONTRACTS

Ticket ID	Description	Use Case ID	Priority
S6-T1	Configurable recruitment workflow	59	High
S6-T2	Automated contract generation and e-signatures	67	High
S6-T3	Talent pipeline management	44	Medium
S6-T4	Job offer negotiation process	34	Medium

Ticket ID	Description	Use Case ID	Priority
S6-T5	Candidate onboarding workflow	29	High

SPRINT 7: COMMUNICATION & NOTIFICATIONS48

Ticket ID	Description	Use Case ID	Priority
S7-T581	Implement candidate-client chat system	51	High
S7-T2	Automated notifications for candidates & clients	7	High
S7-T3	Multi-user collaboration for clients	36	Medium
S7-T4	Automated follow-ups for unresponsive clients	47	Medium
S7-T5	GDPR compliance for data retention and deletion requests	57	High

SPRINT 8: ANALYTICS & DASHBOARDING

Ticket ID	Description	Use Case ID	Priority
S8-T1	Recruitment analytics dashboard	16	High
S8-T2	AI-powered recruitment trend analysis	66	Medium
S8-T3	Candidate behavioral insights tracking	38	Medium
S8-T4	Job performance tracking dashboard	49	Medium
S8-T5	Client recruitment campaign performance tracking	33	Medium

SPRINT 9: SECURITY & ACCESS MANAGEMENT

Ticket ID	Description	Use Case ID	Priority
S9-T1	Role-based access control for admins and clients	54	High
S9-T2	Two-step verification for critical actions	68	High
S9-T3	Audit logging and access monitoring	37	Medium
S9-T4	Secure document storage and encryption	5	High
S9-T5	Multi-role switching for users (Admin & Client)	54	Medium

SPRINT 10: SYSTEM OPTIMIZATION & FINAL TESTING

Ticket ID	Description	Use Case ID	Priority
S10-T1	Performance optimization for large-scale user access	-	High
S10-T2	Load testing and database performance tuning	1	High
S10-T3	Security penetration testing	1	High
S10-T4	Final system-wide bug fixes	68	High
S10-T5	Deployment and monitoring setup on AWS	2	High

SUMMARY

- **Total Duration**: 5 months (10 sprints, each lasting 2 weeks)

- **Priority Focus:** Security, Authentication, AI-driven Matching, Recruitment Process Optimization, and Compliance

- **Outcome**: Fully functional Candidate Management Platform ready for production deployment

By following this strategic roadmap, the project will deliver a fully functional, secure, and AI-driven Candidate Management System by the end of the 5-month period, ensuring efficiency in recruitment, client management, candidate engagement, and system scalability.