# Software Requirements Specification

# PRJ566 – Fall 2024

# PRJ566 – Team No: Group 6

# Name of Project:  Capital Fin's AI-Driven Recruitment Portal

# Project Leader: Duc Long Hoang

**Last updated: 2025-01-27**

**Team Members:**

**1. Duc Long Hoang**

**2. Evan Boileau**

**3. Sebastian Perez Nakazona**

**4.**

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# 1 - Introduction/Overview - Document Information

## 1.1 Document Authors

* Duc Long Hoang
* Evan Boileau
* Sebastian Perez Nakazona

## 1.2 Revision History

|  |  |
| --- | --- |
| Week 03 | Sections of this document that were completed/updated this week, example: completed/updated  1. Introduction/Overview  1.1 Document Authors  1.2 Revision History (ongoing) |
| Week 04 | Project Scope:  1- Stakeholders' List. 2- Project Scope.  3- System Risks  4- Operating Environment |
| Week 05 | Requirements Elicitation:  Functional & non-functiona |
| Week 06 | 1- Activity Diagram.  2- Prototype: UI/UXD -  Wireframes/Mock-ups |
| Week 07 | User Stories and related use case  specifications with corresponding  interface mockups including:  1- Business Rules.  2- System Use Case Diagrams.  3- Use Case Descriptions. |
| Week 08 | Finalized PPT System Mockups/wireframes (Prototype) and Video Development |
| Week 09 | Domain Class Diagram  Team Prototype  Presentations |
| Week 10 | Database Design |
| Week 11 | Implementation Planning |
| Final | Final review and approval of the document. |

## 1.3 Document Conventions

Any text in red indicates an exception or error.

Any text in blue is in-progress.

Any text highlighted in yellow is an important point.

Any text in green was recently added.

Any text *italicized* represents definitions.

Any text with ~~strike-through~~ is deleted.

## 1.4 Document Purpose

1. **Define Clear Requirements:**

* Provide a detailed description of the functional and nonfunctional requirements for the AI-Driven Recruitment Portal.
* Ensure the platform meets Capital Fin's business objectives, including streamlining recruitment, reducing HR workload, and improving hiring accuracy.

1. **Facilitate Stakeholder Communication:**

* Act as a central reference document for all stakeholders, including HR teams, developers, project sponsors, and compliance officers.
* Ensure alignment between technical teams and business stakeholders on project goals and deliverables.

1. **Ensure Compliance and Security:**

* Document adherence to data privacy regulations.
* Define security measures to protect candidate data and ensure confidentiality.

1. **Support Decision-Making:**

* Provide a basis for evaluating project scope, timelines, and resource allocation.
* Enable stakeholders to make informed decisions about feature prioritization and trade-offs.

1. **Track Progress and Changes:**

* Serve as a living document that evolves with the project, incorporating updates and feedback throughout the development lifecycle.

## 1.5 Intended Audience

**1. Development Team**

* **AI Engineer:**
  + Responsible for training and integrating the AI model for resume parsing and ranking.
  + Will use the document to understand the requirements for NLP (Natural Language Processing) and machine learning components.
* **Backend Developers:**
  + Tasked with building the server-side logic, database, and APIs.
  + Will refer to the document for database schema, API specifications, and integration requirements.
* **Frontend Developers:**
  + Responsible for designing and developing the user interface for candidates and HR teams.
  + Will use the document to understand UI/UX requirements, including wireframes and mockups.
* **DevOps Engineers:**
  + Responsible for managing CI/CD pipelines, cloud infrastructure, and deployment processes.
  + Will use the document to understand deployment requirements, scalability needs, and security configurations.

**2. HR Stakeholders**

* **HR Managers:**
  + Primary users of the platform who will post job openings and review AI-ranked candidates.
  + Will use the document to validate that the platform meets their recruitment needs and improves hiring efficiency.
* **Hiring Managers:**
  + Will rely on the platform to identify the best candidates for open positions.
  + Will use the document to understand how the AI-driven portal will streamline candidate screening and selection.

**3. Project Sponsors**

* **Capital Fin Leadership ( CEO, CFO):**
  + Responsible for approving budgets and ensuring the project aligns with business goals.
  + Will use the document to evaluate the project's feasibility, ROI, and strategic value.

## 1.6 Group Agreement

**TEAM AGREEMENT**

**Team #: Group 6**

**Project Title: AI-Driven Recruitment Portal**

**Project Time Frame: 10 Months**

**Team Members:**

* Duc Long Hoang
* Evan Boileau
* Sebastian Perez Nakazona

**Team Leadership:**

Project and Tech Leader: Duc Long Hoang

* Responsible for overall project coordination, timeline management, and stakeholder communication.
* Oversees technical decisions, code quality, and integration of AI/ML components.

**Team Functions:**

* *We will share information through MS Teams, GIthub.*
* *Weekly sprint reviews.*
* ***AI Developer:****Focuses on training and integrating the AI model for resume ranking.*
* ***Backend Developer:****Builds the server-side logic, database, and APIs.*
* ***Frontend Developer:****Designs and develops the user interface for candidates and HR teams.*
* ***DevOps Engineer:****Manages CI/CD pipelines, cloud infrastructure, and deployment processes.*

**Team Meetings:**

1. **Primary Tools:**
   * **MS Teams:** For daily standups, team meetings, and quick communication.
   * **GitHub:** For version control, code reviews, and issue tracking.
   * **OneDrive:** For document sharing and collaborative editing.
2. **Meeting Schedule:**
   * **Weekly Meetings:** 1-hour sessions every Wednesday to review milestones and plan for the next week.
   * **Ad-Hoc Meetings:** Scheduled as needed to address urgent issues.

**Team Problems:**

* Lack of communication among team members
* Limited contribution to tasks or assignments

**Team Commitment**

**The undersigned members agree to work together on the project until the end of the PRJ666 next Semester. They recognize that as a team and individually they are responsible for the quality of all deliverables.**

**Name Date**

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| --- | --- |
| Long | 2025-01-27 |
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# 2 - Project Overview

## 2.1 Project Proposal

Project Background

A brief overview of the background to the project and why it is being carried out.

**Problem Statement**

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| --- | --- |
| The Problem of: | Manual recruitment inefficiencies |
| Affects: | HR Team, Hiring Managers |
| The impact of which is: | Delays, high costs, talent oversight |
| A successful solution would: | AI-driven portal to automate screening and improve hiring accuracy |

**Product Vision**

|  |  |
| --- | --- |
| For | HR Teams in Company. |
| Who | Need efficient, bias-free hiring |
| The Product Name | AI Recruitment Platform |
| That | Reduces time-to-hire by more than 40% |
| Unlike | Traditional ATS tools |
| Our product | Uses explainable AI for transparency |

## 2.2 Stakeholders and Users

|  |  |
| --- | --- |
| Stakeholder Name/Identifier | Category |
| HR Managers | Primary Users |
| Candidates | End Users |
| Compliance Officers | Regulatory Oversight |
| Developers | Technical Team |
| Cost Accountant | User |
| Project Sponsor (CEO) | Administration |

## 2.3 Functional Requirements

1. Job Posting Management:

* HR can create/edit/delete job listings.
* Auto-publish to career page.

1. AI Resume Screening:

* Parse resumes, match keywords to job descriptions.
* Rank candidates (1–5 stars).

1. Candidate Dashboard:

* Apply for jobs, track application status.
* Mobile-friendly interface.

1. HR Analytics:

* Generate reports (e.g., time-to-hire, diversity metrics).

## 2.4 Nonfunctional Requirements

* Performance:
  + Process 500 resumes/hour with <2s response time.
* Security:
  + End-to-end encryption, GDPR/CCPA compliance.
* Scalability:
  + Support 10,000 concurrent users.
* Usability:
  + Intuitive UI (target: 85% satisfaction in UAT).

## 2.5 Project Scope

**In-Scope:**

* AI resume ranking.
* Integration with Capital Fin’s HRIS.
* Compliance with data privacy laws.  
  **Out-of-Scope:**
* Payroll processing.
* Background check automation.

## 2.6 System Risks

|  |  |
| --- | --- |
| **Risk** | **Response** |
| The use of Voice Recognition adds complexity, introducing more ways to hack into your device | Implement various security measures and keep code modular in order to reduce complexity and increase security |
| Some of the team members are not familiar with Android Studio (IDE used to develop Android apps) | Hold team sessions to go over the IDE and how to initialize an APK for app testing /  or the whole team will meet twice a week to complete video tutorials related to . . . |
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## 2.7 Operating Environment

## 2.8 UI/UXD Interface Mock-ups

# Process and Data Modeling

## **3.1 UML/DFD Modeling and Data Modeling**

### Activity Diagrams and Data Flow diagram

## **3.2 Business Rules**

|  |  |  |
| --- | --- | --- |
| Business Rule Number | Business Rule Description | Related UC |
| BR01 | User must provide a username, email and password to register for the app. | UC01 |
| BR02 | Post length can be no longer than 300 characters | UC02 |
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## **3.3 Use Case Specifications with corresponding interface mockups:**

**Each use case needs to have the following:**

1- **Business Rules.**

**2- System Use Case Diagrams.**

**3- Use Case Descriptions.**

**4- Corresponding Mockups**

# Domain Class Diagram

# Database

# Work Breakdown Structure (WBS)

## 

## Work Breakdown Structure

Sample WBS:

Diagram

Description automatically generated

# Milestones and Acceptance Criteria

* 1. Milestone one

Definition

Acceptance Criteria

* …
* ….
* ….
  1. Milestone Two
  2. Milestone Three
  3. ..
  4. …
  5. …
  6. ..
  7. ..
  8. ...etc.

# Implementation Schedule

Implementation Schedule using MS Project (Waterfall)

OR

Product Backlog (Agile-Scrum)

# Client / Faculty Sign-off

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

X .

Name of Client/Rep/Professor