SE-1001 - INTRODUCTION TO SOFTWARE ENGINEERING

SEMESTER PROJECT

ITERATION 0 - PROBLEM STATEMENT AND USER STORIES TO CAPTURE ENVISIONED FEATURES

SUBMITTED BY:

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PROJECT TITLE:

HireMate: An AI-Powered Job Recruitment and Interview Platform

SUBMITTED TO:

Mrs. Saba Kanwal

- **PROBLEM STATEMENT:**

The problem of	increasing difficulty in efficiently connecting qualified job seekers with suitable job opportunities and fairly evaluating candidates during interviews
affects	job seekers and hiring companies
the impact of which is	time-consuming recruitment processes, biased evaluations, and missed opportunities for both candidates and employers
a successful solution would be	an intelligent AI-driven recruitment platform that automates the hiring process by allowing companies to post jobs and applicants to apply easily. The system would feature an AI interviewer capable of assessing a candidate's communication, emotions, and intellectual responses, generating fair and data-driven feedback for employers. This would make recruitment faster, unbiased, and more efficient while providing job seekers with a transparent and engaging experience

- **PRODUCT BACKLOG (USER STORIES):**

(01) **Story ID:** HM-01   **Story Title:** User Registration

User Story: **Importance:**

As a: Job Seeker
I Want To: Create an account on HireMate
So That: I can apply for jobs and track my applications

High

Estimate:

3 Days

(02) **Story ID:** HM-02   **Story Title:** Company Registration

User Story: **Importance:**

As a: Company Representative
I want to: Create a company profile
So that: Post job openings and manage applicants

High

Estimate:

2 Days

(03) **Story ID:** HM-03   **Story Title:** Job Posting

User Story: **Importance:**

As a: Company Representative
I want to: Upload detailed job listings
So that: Job seekers can view and apply for open positions

High

Estimate:

3 Days

(04) Story ID: HM-04   **Story Title:** Job Search

User Story:

Importance:

> **As a:** Job Seeker
> **I want to:** Search for jobs by domain, title, or company
> **So that:** Find relevant opportunities quickly

> High

Estimate:

> 2 Days

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(05) Story ID: HM-05   **Story Title:** Upload CV Feature

User Story:

Importance:

> **As a:** Job Seeker
> **I want to:** Upload my CV during application
> **So that:** Details are automatically extracted and saved

> High

Estimate:

> 4 Days

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(06) Story ID: HM-06   **Story Title:** Manual Data Entry

User Story:

Importance:

> **As a:** Job Seeker
> **I want to:** Enter my details manually without CV
> **So that:** Complete my job application

> Medium

Estimate:

> 2 Days

(07) **Story ID:** HM-07

Story Title: AI Interview Initiation

User Story:

Importance:

As a: Job Seeker
I want to: Be referred to AI interviewer after applying
So that: Complete the first interview round

High

Estimate:

5 Days

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(08) **Story ID:** HM-08

Story Title: AI Interview Experience

User Story:

Importance:

As a: Job Seeker
I want to: Interact with AI interviewer in real-time
So that: Demonstrate communication and problem-solving skills

High

Estimate:

6 Days

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(09) **Story ID:** HM-09

Story Title: Emotion Detection

User Story:

Importance:

As a: Company
I want to: Have AI analyze candidate emotions
So that: Assess confidence, honesty, and stress levels

High

Estimate:

7 Days

10 **Story ID:** HM-10

Story Title: Behavior Analysis

User Story:

Importance:

As a: Company
I want to: Have AI detect behavioral cues such as body language or tone

So that: Understand candidate's personality and attitude

High

Estimate:

6 Days

11 **Story ID:** HM-11

Story Title: Intellectual Evaluation

User Story:

Importance:

As a: Company
I want to: Have AI evaluate intellectual responses
So that: Measure reasoning and problem-solving ability

High

Estimate:

5 Days

12 **Story ID:** HM-12

Story Title: AI Feedback Report

User Story:

Importance:

As a: Company
I want to: Receive detailed AI-generated interview report
So that: Make informed hiring decisions

High

Estimate:

4 Days

(13) **Story ID:** HM-13

Story Title: Selection/ Rejection Decision

User Story:

Importance:

As a: Company
I want to: Get AI interviewer's recommendation (select/reject)
So that: Shortlist candidates efficiently

High

Estimate:

4 Days

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(14) **Story ID:** HM-14

Story Title: AI Confidence Scoring

User Story:

Importance:

As a: Company
I want to: See a confidence score generated by AI for each candidate
So that: Measure the reliability of AI's recommendation

Medium

Estimate:

3 Days

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(15) **Story ID:** HM-15

Story Title: Bookmark Job Feature

User Story:

Importance:

As a: Job Seeker
I want to: Bookmark jobs of interest
So that: Apply later at my convenience

Medium

Estimate:

2 Days

(16) Story ID: HM-16   **Story Title:** AI Voice Analysis

User Story: **Importance:**

As a: Company
I want to: Use AI to analyze voice pitch and tone during interviews
So that: Gain insights into confidence and emotional control

High

Estimate:

5 Days

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(17) Story ID: HM-17   **Story Title:** Company Job Management

User Story: **Importance:**

As a: Company Representative
I want to: Edit, delete, or update job postings
So that: Maintain current and accurate job listings

High

Estimate:

3 Days

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(18) Story ID: HM-18   **Story Title:** Application Status Tracking

User Story: **Importance:**

As a: Job Seeker
I want to: See the current status of my job applications
So that: Stay informed about selection progress

Medium

Estimate:

3 Days

(19) **Story ID:** HM-19   **Story Title:** Job Posting

User Story: **Importance:**

As a: Company Representative
I want to: Upload detailed job listings
So that: Job seekers can view and apply for open positions

High

Estimate:

3 Days

(20) **Story ID:** HM-20   **Story Title:** Admin Analytics

User Story: **Importance:**

As a: System Administrator
I want to: Access platform-wide analytics (users, jobs, interviews)
So that: Monitor overall system usage and performance

High

Estimate:

4 Days

(21) **Story ID:** HM-21   **Story Title:** AI Voice Interaction

User Story: **Importance:**

As a: Job Seeker
I want to: Communicate with the AI interviewer using my voice
So that: Experience a natural and realistic interview session

High

Estimate:

6 Days

(22) **Story ID:** HM-22   **Story Title:** Multi-Company Interview

User Story: **Importance:**

As a: Job Seeker **I want to:** Attend interviews for multiple companies through one profile **So that:** Apply and interview without repeated registration

High

Estimate:

3 Days

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(23) **Story ID:** HM-23   **Story Title:** Resume Parsing Algorithm

User Story: **Importance:**

As a: Developer **I want to:** Implement CV parsing algorithm **So that:** Automatically extract candidate information

High

Estimate:

5 Days

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(24) **Story ID:** HM-24   **Story Title:** View Job Details

User Story: **Importance:**

As a: Job Seeker **I want to:** View details of a job post **So that:** I can decide if I want to apply

High

Estimate:

1 Day

Story ID: HM-25 **(25)** **Story Title:** Job Category Filter

User Story:

Importance:

As a: Job Seeker

I want to: Filter jobs by category

So that: I can find relevant openings faster

High

Estimate:

2 Days

- **SPRINT BACKLOG (FOR NEXT ITERATION):**

Sprint 1 Backlog - User Onboarding & Job Posting (2 Weeks Sprint)

1. **Sprint Goal:**

Build the core foundation of the HireMate platform by enabling **user registration**, **company registration**, and **job posting/search** features.

2. **Selected User Stories:**

(01) **Story ID:** HM-01   **Story Title:** User Registration

User Story: **Importance:**

As a: Job Seeker **I Want To:** Create an account on HireMate **So That:** I can apply for jobs and track my applications

High

Estimate:

3 Days

(02) **Story ID:** HM-02   **Story Title:** Company Registration

User Story: **Importance:**

As a: Company Representative **I want to:** Create a company profile **So that:** Post job openings and manage applicants

High

Estimate:

2 Days

(03) **Story ID:** HM-03

Story Title: Job Posting

User Story:

Importance:

As a: Company Representative I want to: Upload detailed job listings So that: Job seekers can view and apply for open positions

High

Estimate:

3 Days

(04) Story ID: HM-04

Story Title: Job Search

User Story:

Importance:

As a: Job Seeker I want to: Search for jobs by domain, title, or company So that: Find relevant opportunities quickly

High

Estimate:

2 Days

(24) **Story ID:** HM-24

Story Title: View Job Details

User Story:

Importance:

As a: Job Seeker I want to: View details of a job post So that: I can decide if I want to apply

High

Estimate:

1 Day

25 **Story ID:** HM-25   **Story Title:** Job Category Filter

User Story: **Importance:**

As a: Job Seeker **I want to:** Filter jobs by category **So that:** I can find relevant openings faster

High

Estimate:

2 Days

3. **Sprint Deliverables:**

- Functional **user and company registration** modules.

- Working **job posting** and **job search** with category filters.

- Basic **job detail page** linked to search results.

4. **Team Tasks Breakdown:**

Roles	Tasks
Frontend Developer	Design registration, job posting, and search UIs using a consistent layout
Backend Developer	Build REST APIs for authentication, company/job management, and search
Database Engineer & QA Tester	Create tables for users, companies, and jobs (ER model) and test registration flow, search accuracy and form validations

5. **Total Effort:**

Story ID	Days	Cumulative Days
HM-01	3	3
HM-02	2	5
HM-03	3	8
HM-04	2	10
HM-24	1	11
HM-25	2	13

Sprint Duration: 2 Weeks (10 Working Days)

Buffer for Testing & Integration: 2–3 Days

6. **Definition of Done (DoD)**

- All features deployed on the development environment.

- All acceptance criteria for selected stories are met.

- Unit and integration tests pass successfully.

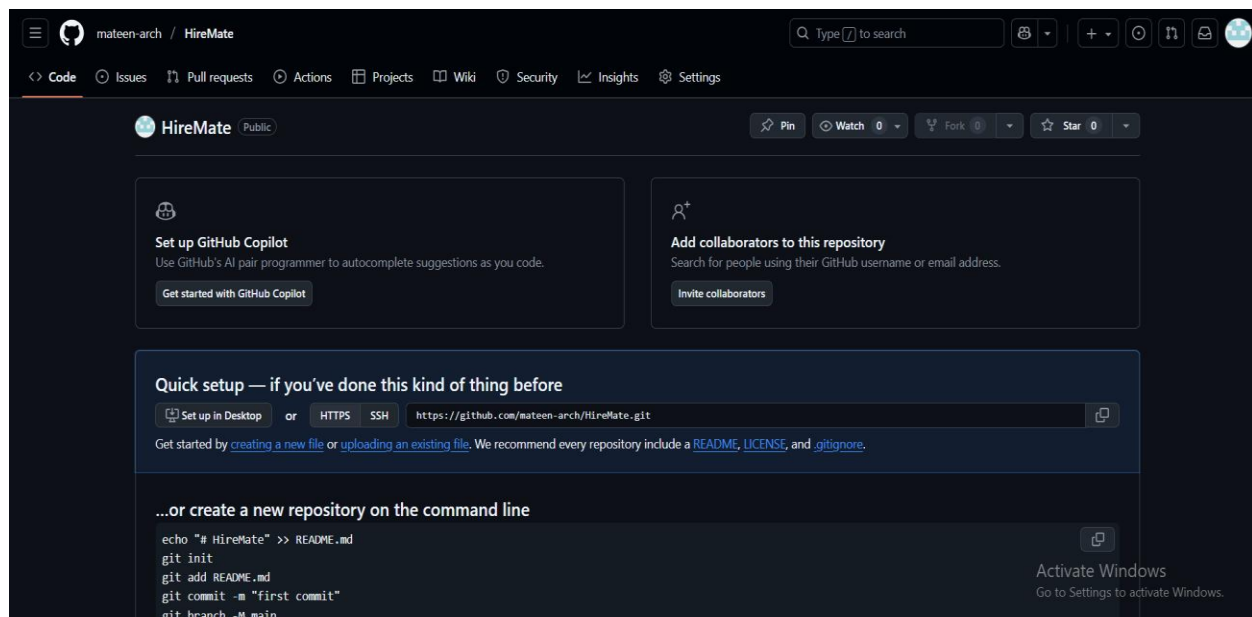- Code reviewed and merged into main branch.

- **ROLES:**

Member	Role	Duties & Responsibilities
Member 1	Product Owner	- Define and maintain the **product vision** and overall goals of the *HireMate* project. - Create and prioritize items in the **Product Backlog**. - Clearly communicate **project requirements** and desired outcomes to the team. - Make sure the **final product aligns with user needs** (both job seekers and companies). - Act as the **main point of contact** for any requirement clarifications during the iteration. - Accept or reject completed work during the sprint review.
Member 2	Scrum Master	- Facilitate the **Scrum process** and ensure Agile principles are followed. - Organize and lead **daily standups**, sprint planning, sprint reviews, and retrospectives. - Remove any **obstacles or blockers** faced by the team during development. - Support the Product Owner in maintaining the Product Backlog. - Make sure the team stays focused and the sprint goals are achieved. - Encourage collaboration and continuous improvement.

Member 3	Scrum Team Member (Developer)	- Actively participate in **sprint planning** to estimate and commit to tasks. - Design, develop, and test the **assigned features** (frontend, backend, or AI components). - Collaborate closely with the Scrum Master and Product Owner for requirement understanding. - Deliver **incremental product updates** within each sprint. - Participate in **code reviews**, testing, and bug fixing. - Provide progress updates in daily standups.

- **GITHUB REPOSITORY SCREENSHOT AND LINK:**

https://github.com/mateen-arch/HireMate

- **TRELLO SNAPSHOTS:**

HireMate - Intro To SE Project

Product Backlog

As a job seeker, I want to create an account on HireMate, so that I can apply for jobs and track my applications.

As a company representative, I want to create a company profile, so that I can post job openings and manage applicants.

As a company representative, I want to upload detailed job listings, so that job seekers can view and apply for open positions.

As a job seeker, I want to search for jobs by domain, title, or company, so that I can quickly

+ Add a card

Sprint Backlog

As a job seeker, I want to create an account on HireMate, so that I can apply for jobs and track my applications.

○ As a company representative, want to create a company profile, so that I can post job openings and manage applicants.

As a company representative, I want to upload detailed job listings, so that job seekers can view and apply for open positions.

As a job seeker, I want to search for jobs by domain, title, or company, so that I can quickly

+ Add a card