



*Graduation Project Proposal*  
**ASPIRA**

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# 1 Introduction

The transition from education to professional life is a crucial phase that defines an individual's career path. In Saudi Arabia, this challenge has become a key focus as the country works towards Vision 2030, emphasizing the empowerment of youth by bridging the gap between academic education and professional development. However, many students and graduates face challenges during this transition due to the lack of personalized career guidance and targeted skill-building opportunities.

This project addresses the issue of insufficient mentorship and career guidance available to students and graduates. Without proper support, many struggle to enter the workforce with confidence, leading to a skills gap that impacts their ability to effectively participate in the job market.

To tackle this, we propose the development of a web-based platform called ASPIRA, designed to provide personalized mentorship and career development support through technology. By leveraging artificial intelligence, the platform aims to enhance accessibility and offer tailored guidance through features such as AI-powered chatbot, recommendation system, and a unified hub connecting mentees with professional mentors. This platform aims to equip students and graduates with the skills, confidence, and direction they need to succeed in their careers.

This document will provide a detailed description of the problem being addressed, outline the proposed solution, and include details about the technologies used, methodologies adopted, and expected outcomes of the project, aligning the initiative with the objectives of our Vision.

## 2 The Problem

In Saudi Arabia, a significant real-world problem persists: many mentees, particularly bachelor's students and recent graduates, struggle to transition effectively from education to the workforce. This challenge is particularly critical because it affects their ability to contribute meaningfully to the country's growth and long-term objectives.

For example, consider a university graduate who, despite excelling academically, finds it difficult to identify the right career path or acquire the skills needed for specific roles in the competitive job market. The lack of accessible and personalized career guidance often leaves individuals like this graduate unprepared to navigate the complexities of professional development.

Our project focuses on addressing a critical part of this issue: the absence of tailored mentorship and skill-building opportunities. Many mentees lack regular access to professional mentors who can provide career advice tailored to their goals and interests. This gap hinders their ability to plan effectively for their careers, build confidence, and acquire relevant skills. By bridging this gap, we aim to empower youth to achieve their professional potential and align with national aspirations for a skilled and competitive workforce.

### 3 The Solution

This project is designed to revolutionize career mentorship by creating a smart, AI-powered platform that bridges the gap between mentees and professional mentors. The goal is to provide personalized guidance, structured mentorship, and tailored learning resources, helping mentees navigate their career paths with confidence. Unlike traditional systems where finding the right mentor can be difficult and guidance is often generalized, this platform ensures that mentees are matched with mentors who align with their interests, career aspirations, and expertise needs.

The platform's Mentor Management system, handled by an admin, ensures that only qualified and verified mentors are approved, maintaining a high standard of mentorship. To make mentorship more accessible and effective, mentees can search for and filter mentors based on criteria such as industry and years of experience, ensuring a personalized experience. Once connected, mentees can book private one-on-one mentorship sessions or participate in interactive group sessions through the Twilio API, enabling seamless video communication for career discussions, skill-building, and guidance. Mentees can reschedule or cancel their bookings, while mentors have the ability to adjust or remove sessions as needed. To ensure clear communication, mentees will receive a notification whenever a mentor reschedules or cancels a booked private session. This keeps them informed about any changes and allows them to manage their schedules effectively. To enhance the learning experience, each session is documented, with mentors responsible for writing summaries so mentees can review key takeaways at any time.

Beyond mentorship sessions, the platform actively supports mentees' career growth through an AI-powered recommendation system that suggests relevant courses based on user interests, ensuring they develop skills aligned with their professional goals. Additionally, an AI-powered chatbot, integrated using OpenAI's technology, provides instant assistance with platform navigation, session management, and career-related inquiries, ensuring mentees always have access to the information they need.

Mentees and mentors have full control over their profiles, allowing them to update their information, as their careers progress. To further support mentees in their professional growth, the platform includes a CV Builder, which helps mentees create a professional CV by entering their personal details, education, skills, and work experience. This feature allows mentees to generate CV for job applications and networking opportunities.

By combining AI-driven learning, structured mentorship, real-time interactions, and a strong community-driven approach, this platform provides an essential resource for career development. It directly supports Vision 2030 by equipping Saudi youth with the skills, mentorship, and guidance they need to thrive in a competitive job market. By fostering a culture of mentorship,

skill-building, and knowledge-sharing, the platform empowers a new generation of professionals, contributing to national growth, economic innovation, and workforce readiness.

## 4 Product Vision

**For** mentees in Saudi Arabia.

**Who** need personalized career guidance and skill-building opportunities to transition into the workforce.

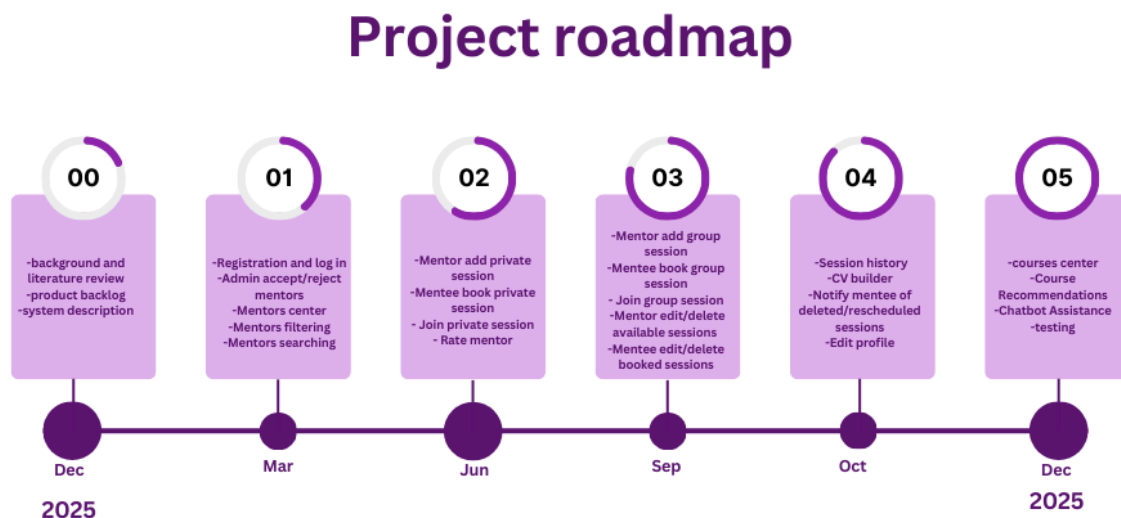
**The** ASPIRA platform **is** a web-based career development and mentorship platform .

**That** provides tailored real-time mentorship.

**Unlike** traditional mentorship programs or generic online mentoring platforms.

**Our product** uses AI to offer personalized guidance, a dynamic recommendation system for a seamless user experience, and AI-powered support, a chatbot to help users achieve their career goals.

## 5 Product Roadmap



## 6 Objectives

Our objective is to develop the "ASPIRA" career guidance platform, designed to bridge the gap between mentees and mentors across various fields. This platform will provide several key features, including:

- **Product (customer focus-value):**

1. **Mentors / Mentee Registration:** Enable mentors and mentees to register to access the platform's features, with dedicated interfaces for each user type.
2. **User (Mentor/Mentee/Admin) Login:** Enable users to log in their accounts to access the platform.
3. **Mentor Management:** Enable Admin to view and manage the list of all registered mentors and approve or reject mentors based on their provided qualifications and information.
4. **CV Builder:** Mentees can enter their personal details, education, skills and work experience to create a professional CV for career growth opportunities.
5. **Mentors center:** A dedicated center displaying mentors profiles with information such as their name, photo, experience, availability, and brief description, enabling mentees to search mentors.
6. **Mentor Filtering:** Enable mentees to filter mentors based on their field of expertise, Experience years and ensuring a personalized and efficient search experience.
7. **Mentor searching:** Enable mentees to search for mentors using specific criteria, such as name, to easily find the mentor that they are looking for.
8. **Private Session Booking:**to enable mentees to easily book private mentorship sessions.
9. **Join private sessions:** Utilizes Twilio API, that has embedded video call functionality, to enable mentees to join live video private sessions.
10. **Group Sessions:** to enable mentees to easily book group mentorship sessions.
11. **Join group sessions:** Utilize Twilio API, to allow mentees to join live video calls, for general career guidance and advice, fostering a collaborative and inclusive learning environment.

12. **Mentor Rating:** Allow mentees to rate mentors to improve platform reliability.
13. **Past sessions:** Contains a list for both mentors and mentees previous sessions, including date/time and name. It will also include a session summary for the mentees prepared by the mentor, providing a summary of each session, making it easy for users to refer back to the main points discussed.
14. **Upcoming session:** Keep track of future sessions for both mentors and mentees.
15. **Initiating Sessions:** The mentors can add and display sessions available to mentees. Mentees can choose and book from this list of available sessions.
16. **Mentee session management:** Mentee can reschedule only private sessions to a different available time slot or delete the booking of private/group sessions if they no longer need the session.
17. **Mentor session management:** Mentor can edit the time of private and group sessions or delete scheduled sessions if needed.
18. **Mentee Notifications:** Mentees will be notified when the mentor reschedules or deletes the booked private session, this ensures they stay informed about any changes.
19. **courses center:** dedicated center displaying courses information such as their name and online link, providing an easy way for mentees to explore available learning opportunities.
20. **Course Recommendations:** Implement an AI recommendation system specifically designed to suggest relevant course content tailored to user interests. The system leverages user input to provide personalized recommendations, ensuring users find the most suitable and engaging course materials for their needs.
21. **Chat Assistance:** Integrate an OpenAI-powered chatbot to assist users with platform navigation and career guidance, providing instant support and recommendations.
22. **Profile Management:** Enable mentors and mentees to edit their profiles.
23. **Intuitive Interface:** Ensure a user-friendly experience for seamless navigation, session booking, and resource access.



- **Project (solution focus-plan):**

1. **User Research:** Conduct surveys and interviews with mentees, and mentors to identify challenges and expectations.
2. **Requirement Analysis:** Define functional and non-functional requirements to ensure user-centric platform features.
3. **Background research and literature review:** conduct domain analysis along with a comprehensive competitive analysis
4. **System Design:** Create architecture and wireframes for an intuitive and interactive platform interface.
5. **Data Collection:** Prepare mentor profiles, FAQs, and course data for integration.
6. **Feature Development:** Build key features, including the chatbot, recommendation system, and session booking functionality.
7. **Testing and Feedback:** Conduct usability testing, gather user feedback, and refine the platform for reliability and ease of use.
8. **Launch and Monitoring:** Deploy the platform and monitor performance for continuous improvement.

- **Learning (student focus):**

By completing the ASPIRA project, we aim to learn new skills that will help us in real-world software development, including:

1. **Frontend Development:** Design a responsive and user-friendly interface.
2. **Backend Development:** Build robust data management and processing systems.
3. **Database Management:** Design and manage efficient databases to handle user profiles, scheduling, and platform data.
4. **AI Integration:** Implement content-based recommendation systems and chatbot functionality.
5. **System Integration:** Connect frontend, backend, and databases for a seamless platform experience.
6. **Team Collaboration:** Improve teamwork and communication skills.

## 7 Scope

ASPIRA is a mentorship platform designed to connect mentees with experienced mentors who align with their career goals, interests, and fields of study. It provides a structured and interactive environment where mentees can seek guidance, gain industry insights, and receive personalized support throughout their professional journey. Unlike traditional mentorship programs, ASPIRA leverages technology to ensure accessibility, efficiency, and engagement.

ASPIRA offers private one-on-one mentorship sessions and interactive group sessions, allowing mentees to connect with mentors in real-time. Users (mentor and mentees ) can easily reschedule or cancel sessions, while the notify mentee feature ensures that mentees receive updates when a mentor reschedules or cancels a booked private session. To enhance mentorship impact, mentors are responsible to summarize each session, for mentees to revisit for future reference. Additionally, mentees can rate mentors after sessions, helping maintain quality guidance. Furthermore, ASPIRA is fully accessible across all devices, ensuring seamless interaction anytime, anywhere. ASPIRA simplifies mentor discovery through its Mentor Center, where mentees can filter mentors by field or search for specific names. Besides the CV Builder feature allows mentees to input their details and expertise to create a CV. To enhance the user experience, ASPIRA integrates AI-driven features, an OpenAI-powered chatbot that provides instant support for navigation, mentorship queries, and career advice. Additionally, a Course Center with a recommendation system to suggest relevant learning opportunities based on mentees' interests and career objectives. ASPIRA is a mentorship and career guidance platform, not an educational course provider. While it offers intelligent course recommendations, it does not handle course registration, enrollment, or payment processing. Its primary mission is to foster meaningful mentor-mentee connections, support career growth, and provide structured, AI-enhanced guidance.

## 8 Hardware/Software Tools and Cost

Hardware Tools	
Name and Description	Cost
Laptop	Every student has their own device.
Software Tools	
Name and Description	Cost
MySQL (Database Management)	Free
Visual Studio code is A simple code editor that helps with tasks like debugging, running jobs, and keeping track of different versions of your code and supports almost every major programming language."	Free
Courses API a simple service that provides access to a list of courses, allowing users to browse and view detailed course information effortlessly.	undefined
GitHub is a web-based hosting service for git repositories.	Free
Jira "It's the agile project management tool that teams use to plan, track, release,	

and support high-quality software with confidence."	Free
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## 9 Scrum Team

### 9.1 Skill Set Requirements

List the set of technical skills required for the team to be able to develop the product, also highlight any skill gaps available and describe how the team will address this need.

Technical Skill Required	What is the current level of the team ( <i>beginner-intermediate- advanced</i> ) for each skill? How will the gap be bridged? ( <i>if necessary</i> ) Learning plan
Programming languages	Intermediate, additional self-learning and online courses.
Dealing with APIs	Beginner (We can enhance our API skills by reviewing fundamental concepts such as API structure from the specification document).
Database Management (MySQL)	Intermediate, Follow online tutorials and build database-driven applications
Training the AI models	Beginner (We can strengthen our skills by addressing the fundamental concept behind the AI model and seeking for small projects).
UI-UX skills	Advanced

## 9.2 Roles and Responsibilities

Scrum Team	
<b>Product Owner:</b>	Dr. Arwa Alsultan
<b>Developers:</b>	Aeshah Almuklifi Luluh Alyahya Shahad Alsalman Ghadi Alzahrani Noura Alwohaibi
<b>Scrum Master (SM):</b>	Dr. Arwa Alsultan
<b>Stakeholders:</b>	Examiners and mentees

## 10 References