PUCIT
Punjab University College of Information Technology

Final Project Proposal

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Final Project Proposal

1. Introduction

1.1 Project Title

Viaduct-AI-based competitive, social, and hiring space for students.

1.2 Project Overview Statement

The viaduct is an AI-based competitive, social, and hiring space for students. The main goal of this is to provide a competitive platform for students and a space where companies can list the students according to their requirements.
The main features of Viaduct include a profile for each student, students will be ranked according to their projects, CGPA, and assessment test. There will be a feature of the project exhibition where students can see each other's projects and can rate them. This will also include a prediction module for students which will predict the chances of getting their first job in a reputable company and this module also predicts their first salary. This will also include companies profile management, and a smart search module to search students, and companies according to user input.

1.3Project Overview Statement Template

Project Title: **Viaduct**-AI based competitive, social and hiring space for students.

Group Leader: Muhammad Asim

Project Members:

Name	Roll Number	Email	Signature
M Nouman Ali	BCSF19A017	bcsf19a017@pucit.edu.pk	
Muhammad Asim	BCSF19A021	bcsf19a021@pucit.edu.p	
Alishba Mahmood	BCSF19A029	bcsf19a029@pucit.edu.pk	
Hamza Amjad	BCSF19A036	bcsf19a036@pucit.edu.pk	
Irsam Ahmad	BCSF19A040	bcsf19a040@pucit.edu.pk	

Project Goal:
The main goal of this project is to provide a competitive platform where while competing with other students to get higher in the rank students will not only grow their skills but also stay informed about other students' progress towards the end of their degree. Companies will be provided a space where they can shortlist ranked and recommended students according to their vacancies and requirements.

Objectives:

Sr.#	
1	Develop a platform for companies to interact with students directly.
2	Create an AI-based recommendation system of students for companies.

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3	Rank students according to their skills, Cgpa, projects, and other factors.
4	Companies can search for students depending on their vacancies and demands.
5	Prediction of student's first Salary/Job
6	Conduct surveys from the graduated students.

Project Success criteria:
Projects will be considered successful if it fulfills the above-mentioned goals and objectives within the allotted time.

Assumptions, Risks and Obstacles:

Assumptions:
- Students will share their correct data.

Risk:
- Data gathered from surveys is not enough to train AI models efficiently.

Obstacles:
- No previous relevant dataset
- New to the chosen stack(MERN)

Organization Address (if any):
Punjab University College of Information Technology

Type of project: ❑Research ■Development

Target End users: Graduates and Undergraduates students of information technology and software houses.

Development Technology: ■Object Oriented ❑Structured

Platform: ■Web based ❑Distributed
❑Desktop based ❑Setup Configurations
❑Other

Suggested Project Supervisor: Dr. Muhammad Farooq

Approved By:

Date: November 1st, 2022.

1.4 Project Goals & Objectives

The main goal of this project is to provide a competitive platform where while competing with other students to get higher in the rank, students will not only grow their skills but also stay informed about other students' progress towards the end of their degree. Companies will be provided a space where they can shortlist ranked and recommended students according to their vacancies and requirements. The required data will be gathered from surveys done by ourselves to ensure the correctness of data and to ensure the most optimized results as this platform may decide the career path of students. Our objectives will revolve around making this platform a place to get better in your field while ensuring your best future.

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1.5 High-level system components

- *Student profile management*
- *Student Ranking Module*
- *Students' Project Exhibition Module*
- *Students Salary/Job Prediction Module*
- *Social Side for Students*
- *A Recommendation System for students*
- *Companies profile management*
- *Smart Search Module*

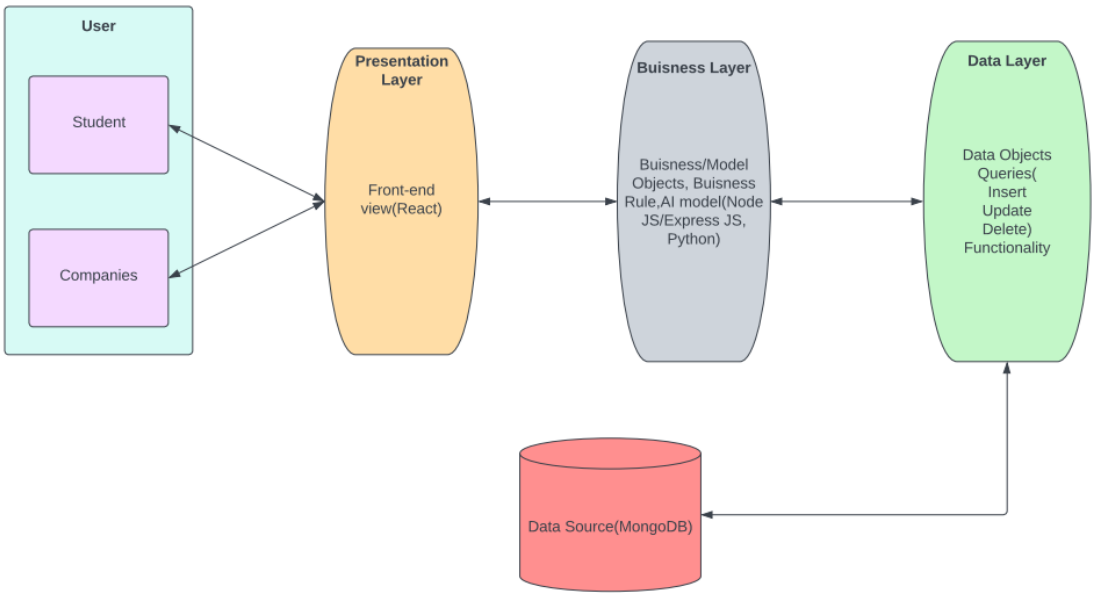
1.6 List of optional functional units

- Skill Assessment Test for Students according to their skills.
- Full Fledged Implementation (Project Execution)
- Conduct Programming Competition

1.7 Exclusions

- Authenticity and Originality of Student's Project
- Mobile Application

1.8 Application Architecture



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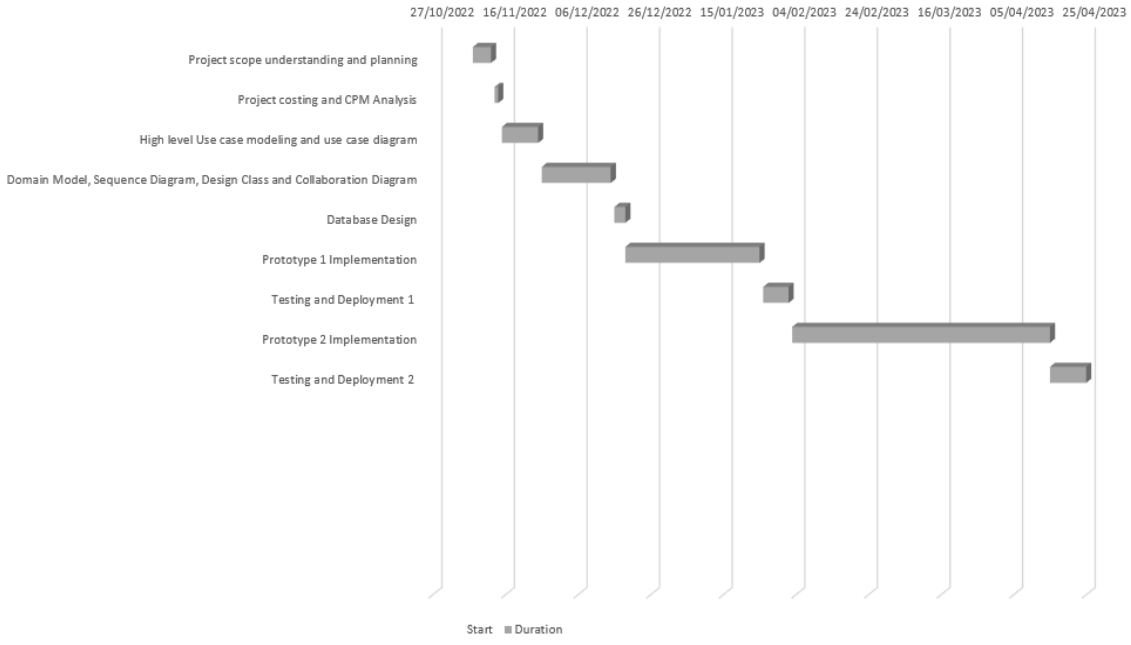
1.9 Gantt chart

ID	Task Name	Start	Finish	Predecessors	Duration (Days)
1	Project scope understanding and planning	07/11/2022	12/11/2022		5
2	Project costing and CPM Analysis	13/11/2022	14/11/2022	1	1
3	High level Use case modeling and use case diagram	15/11/2022	25/11/2022	2	10
4	Domain Model, Sequence Diagram, Design Class and Collaboration Diagram	26/11/2022	15/12/2022	3	19
5	Database Design	16/12/2022	19/12/2022	4	3
6	Prototype 1 Implementation	19/12/2022	25/01/2023	5	37
7	Testing and Deployment 1	26/01/2023	02/02/2023	6	7
8	Prototype 2 Implementation	03/02/2023	15/04/2023	7	71
9	Testing and Deployment 2	15/04/2023	25/04/2023	8	10



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1.10 Hardware and Software Specification

Client-Side Hardware Requirements:

- Mobile phone or desktop (Web based)
- RAM: 512MB or more

Client-Side Software Requirements:

- Windows, MAC, Linux
- Web Browser

1.11 Tools and technologies used with reasoning

Tools:

Tools	Reason for Using
Visual Studio Code	Frontend and backend development
MongoDB Atlas	Database server in the backend
Git and GitHub	Collaboration of Team
MS Word/Google docs	Project Documentation

Technologies:

Technologies	Reason for Using
React.JS	For frontend development
MongoDB	For database
Node.JS / Express.JS	For backend development
Python and other tools	For Artificial Intelligence and Machine Learning

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