

Project Number: P37

Project Title: Capstone Projects Management Platform

Project Clients: Dr Basem Suleiman, School of Computer Science and Engineering

Project Specializations: Software development/Engineering, Web Application Development.

Number of groups: 2

Background:

Capstone projects involve many stakeholders such as students, academics, industry partners and administrators. Supporting the management of capstone projects becomes crucial for large number of projects and stakeholders. This includes streamlining the capstone project process, from project creation and allocation to communication, analytics, and reporting. It aims to enhance the experience of both students and project owners, including academics and industry partners, involved in capstone projects.

This project can involve multiple teams who are willing to work under one project and share a technology infrastructure and environment. Detailed features (including the ones listed below) will be discussed and distributed among different teams. Allocated teams should work as one team and under one project.

Requirements and Scope:

The goal of this project is to design and implement a Web application to support the management of capstone projects. This includes designing optimal and intuitive processes for the capstone projects, from project creation and allocation to communication, analytics, and reporting. The processes, which will be design and implemented as part of this project, to enhance stakeholders' experience, including academics and industry partners. The core features of this platform include the following (additional and more detailed requirements will be discussed with allocated teams)

- User roles and profiles: administrator users, students, project clients (e.g., academics, industry partners), coordinators and tutors.
- Project clients to create and maintain projects, view students' preferences,
- Students maintaining their profiles and preferences.
- Students forming groups and choosing project preferences.
- Coordinator and tutors can facilitate groups and projects.
- Students communicate with project clients and coordinators and tutors.
- Coordinators and tutors oversee and approve project allocations.
- Integrated messaging for students and project owners to communicate.
- Notifications for project updates, messages, and allocation results.

- Generating reports on project allocation, student preferences, and project outcomes.
- Dashboard management of groups and projects

Required Knowledge and skills:

- Familiarity with web application development (front-end and back-end)
 - Technology stack can be flexible – e.g., MEAN stack.
- Familiarity with web development and testing frameworks and practices
- Familiarity with database design and management for storing data (e.g., NoSQL)
- Familiarity with UI/UX principles and implementation
- Familiarity with Agile software development methods, practices, and tools
- Familiarity with software testing, building and deployment.

Expected outcomes/deliverables:

- Project documentation including source code, system architecture and design, UI/UX, different types of testing, user manuals and guide, technical guide.
- Responsive Web application which is accessible on various devices, e.g., tablets and smartphones.

Supervision: Piyavachara Nacchanandana

Additional Resources:

TBC