

PROJECT ABSTRACT

Peer Mentorship Matching Platform

A web platform that matches junior students with verified senior mentors by subject and availability: mentor profiles, match scoring, session requests, scheduling and ratings. Delivered built-to-order with the complete web application, report, PPT and viva kit.

01. Title

Peer Mentorship Matching Platform

02. Introduction / Background

Juniors struggling with tough subjects usually turn to whichever senior they happen to know, while capable seniors willing to mentor have no visible way to offer help. The matching is accidental: the right mentor for data structures might sit two rows away, unknown to the student who needs her. A mentorship platform makes the supply and demand visible. Seniors create verified profiles listing subjects, achievements and weekly availability; juniors search by subject, see match scores computed from subject overlap, ratings and availability fit, and request 1:1 sessions. Every session is rated, so quality compounds over semesters instead of resetting every year.

03. Problem Statement

Peer learning in colleges is informal and luck-based: juniors cannot discover which seniors can help with a specific subject, seniors cannot signal availability, and there is no record of session quality. The project addresses this with a platform that verifies mentors (CGPA and faculty endorsement), computes match scores from subject tags, past ratings and slot overlap, manages session requests through request → confirm → complete → rate, and gives mentees a dashboard of upcoming sessions and learning history.

04. Objectives

- Onboard mentors with verification: CGPA threshold, subjects, availability and faculty endorsement.
- Let mentees search and filter mentors by subject, branch, rating and availability.
- Compute a transparent match score from subject overlap, rating and slot compatibility.
- Manage the session lifecycle: request, mentor confirm/decline, reminders, completion and rating.
- Give mentees a dashboard: upcoming sessions, request status and session history.
- Give mentors a dashboard: incoming requests, weekly schedule and aggregate ratings.
- Deliver the complete student kit: working web app, database schema, report, PPT and viva Q&A.;

05. Proposed Methodology

Built as a three-tier web application. (1) Profile and verification module: mentor applications with document/CGPA checks and an admin approval step before the profile goes live. (2) Matching engine: a weighted score combining subject-tag overlap, normalised rating, response-time history and availability overlap with the mentee's free hours; weights are configurable and documented. (3) Session module: request state machine with calendar slots, reminder hooks and a two-sided rating on completion. The methodology chapter documents the matching-weight design, the verification workflow, and test cases for double-booking, declined requests and rating aggregation.

06. System Architecture / Working

A senior applies with subjects, achievements and weekly slots; after verification the profile goes live. A junior searches a subject (e.g. data structures) and sees ranked mentor cards with match scores, ratings and next availability. Selecting a mentor opens the profile with reviews; the junior picks a slot, states the topic and sends a request. The mentor confirms or suggests an alternative; both get reminders before the session. After the session the mentee rates it, which feeds the mentor's public rating and future match scores. A code-of-conduct module and grievance link sit on every session page.

07. Hardware / Software Requirements

- Server: shared hosting/VPS or college intranet; client needs only a browser.
- Backend: PHP (Laravel) or Node.js (Express) with role-based access (mentee, mentor, admin).
- Database: MySQL/PostgreSQL — profiles, slots, sessions, ratings.
- Frontend: responsive HTML/CSS/JS; calendar widgets for slot picking.
- Optional: email/SMTp reminders; video-link field for online sessions.

08. Expected Outcomes

- A working platform with verified mentor profiles, ranked matching and session scheduling.
- A transparent, documented match-scoring formula the student can explain in the viva.
- Dashboards for mentees, mentors and admins with session and rating histories.
- A complete report (SRS, ER diagram, matching-algorithm design, test cases), PPT and viva Q&A.;

09. Applications

- Formalising peer learning and senior-junior knowledge transfer in colleges.
- Teaching recommendation/matching fundamentals and reputation-system design.
- Adaptable to alumni mentoring, placement buddy systems and club onboarding.

10. Future Scope

- Group mentoring sessions and subject-wise study circles.
- Skill-endorsement badges verified by faculty.

- Integration with the college LMS for subject enrolment data.
- Analytics for faculty: which subjects generate the most help requests.