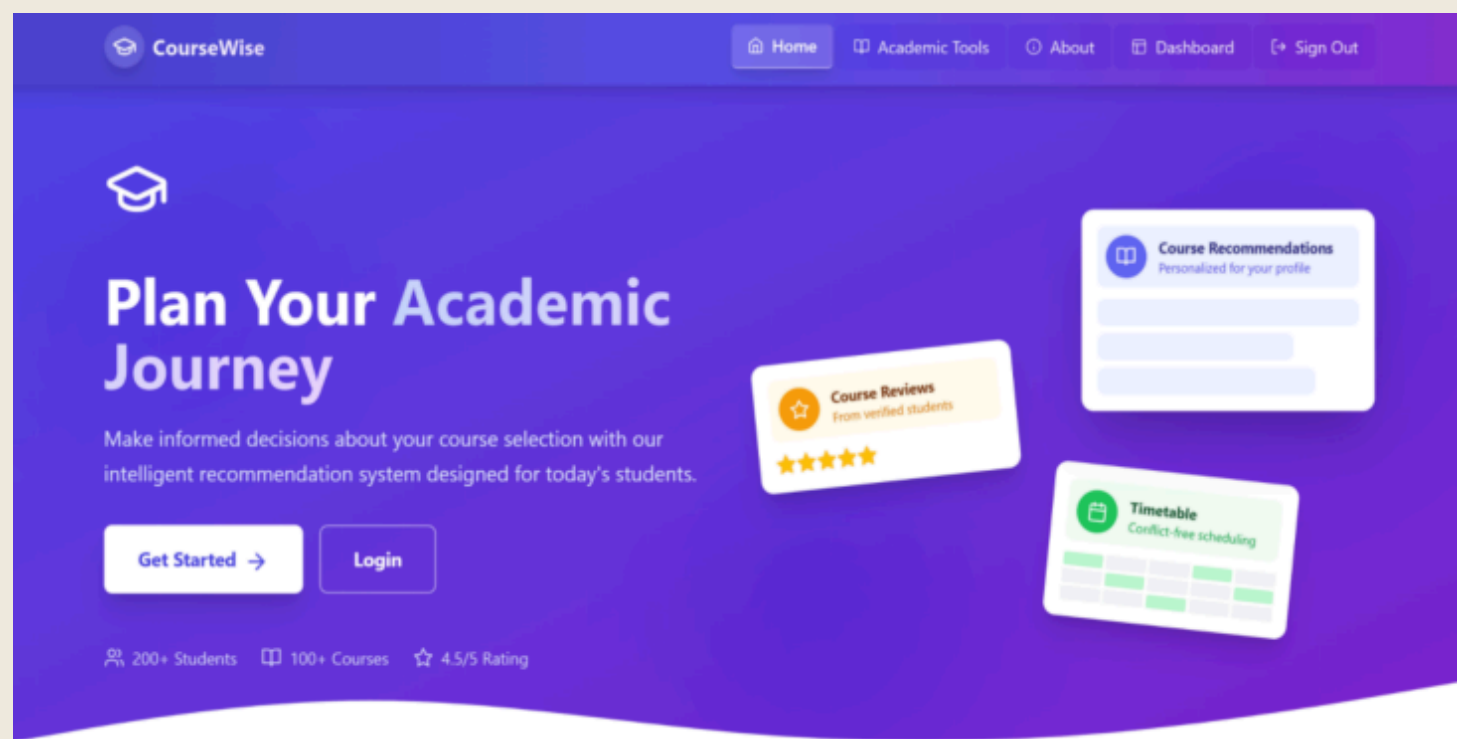# CourseWise

A unified digital platform for informed and streamlined course selection.

Advisor: Dr. Anuj Grover

MEMBERS

Dhruv Dewan (2022165), Dhruv Rajput (2022169), Sarthak Srivastav (2022458)

01. Introduction

Students often face a disjointed and frustrating experience while selecting their courses each semester. Information is spread across multiple systems, making it hard to find and compare course details or prerequisites. There's also a lack of structured peer feedback, leaving students to rely on informal suggestions. Manual timetable creation adds to the burden, increasing the risk of conflicts and errors. This time-consuming process can impact both academic performance and decision-making. CourseWise addresses these issues by offering a centralized and personalized platform for streamlined course planning.
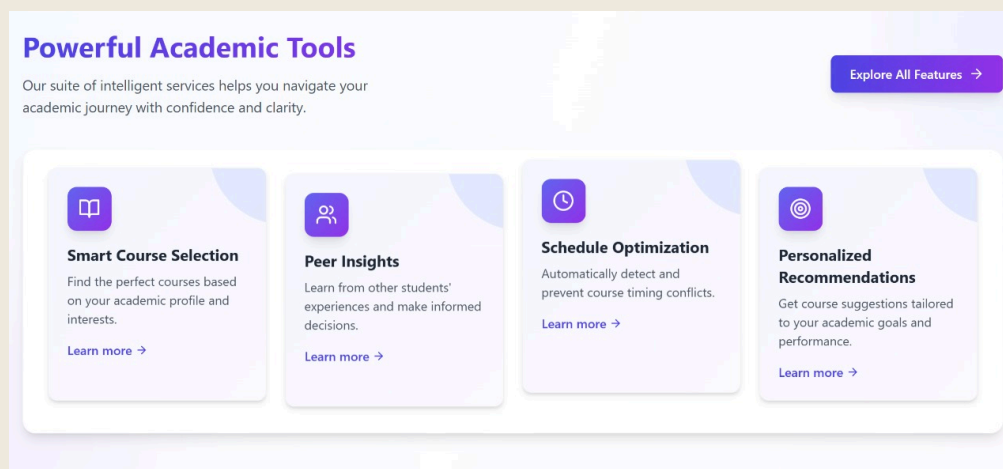
05. Key Features Developed

- **Course Catalog**: 150+ courses with filters and detailed pages.
- **Peer Reviews**: Multi-dimensional ratings, review moderation, and user profiles.
- **Timetable Builder**: Drag-and-drop, clash detection, and calendar export.
- **Authentication**: JWT, role-based access, Google OAuth.
- **Admin Dashboard**: Manage courses, users, reviews, and monitor platform activity.

02. Value Proposition: CourseWise Solution

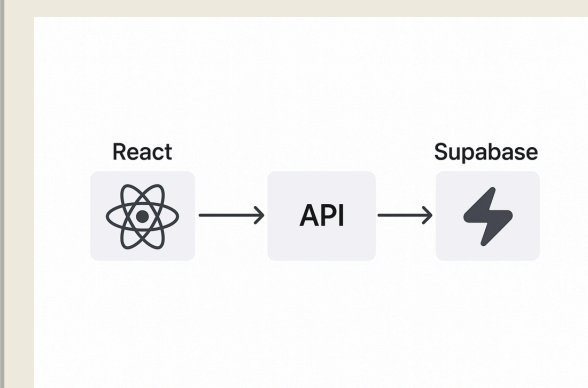CourseWise simplifies and enhances course planning by offering:
- **Unified Access**: One platform for course info, peer reviews, schedules, and academic tracking.
- **Smart Suggestions**: Personalized recommendations based on student profiles and interests.
- **Timetable Builder**: Drag-and-drop planner with real-time clash detection and calendar export.

03. Technology Stack & Architecture

- **Frontend**: React, Chakra UI, Framer Motion, React Router
- **Backend**: Supabase (PostgreSQL, Auth, Storage, RLS)
- **Deployment**: Vercel

System Architecture Diagram:

04. Competitive Analysis

Platform	Strengths	Weakness
Shiksha	Extensive reviews & info	Static; no community-building
LinkedIn	Professional networking	No course-specific guidance
Instagram	Visual sharing	Scattered academic content
Discord	Community channels	Tech-heavy; not academic-focused

The Business Model Canvas

Key Partnerships
- College administration and faculty (for data and feedback)
- College ERP portal
- Cloud service providers (AWS, GCP, etc.)
- Alumni or student networks for early testing and promotion

Key Activities
- Training and refining the recommendation ML model
- Web development and maintenance
- Data collection, validation, and updates
- User feedback integration and support

Key Resources
- Machine learning models and course data
- Development team (frontend/backend)
- Database of courses, branches, and feedback
- Hosting infrastructure and servers
- UX/UI assets for ease of student use

Value Propositions
- Personalized course recommendations based on academic history and interests
- Automated timetable creation with clash detection
- Peer-sourced course feedback to aid decision-making
- Time-saving and stress-reducing academic planning tool

Customer Relationships
- Self-service through the website
- Feedback and support system for students
- Institutional support via admin dashboards or tools

Channels
- College internal portals
- Project's website
- Social media and student communities
- Integration with university ERP systems in the future

Customer Segments
- College students (IIITD initially)
- College administrators and academic advisors
- Students from other universities and colleges (Future)
- Ed-tech platforms or university management systems

Cost Structure
- Server and hosting costs
- Data acquisition and management
- Marketing and outreach
- Research and improvement of ML models

Revenue Streams
- Freemium model (basic features free, premium features paid)
- Institutional licensing (colleges pay for campus-wide access)
- Advertisements for educational content/providers
- API access for integration with other platforms

06. Challenges & Solutions

- **Limited Supabase Access**: Used a trial version of Supabase, so we couldn't add courses or build a full backend.
- **No existing course reviews**, as this was our first version.
- **Dependency on Student Feedback**: ML model depends on student reviews, which are yet to be collected.

07. Future Work

- In the future, we plan to work on the machine learning (ML) model.
- All the remaining features need to be developed.
- We need to collect course reviews from students to train the model.
- As per Anuj Sir's guidance, the goal is to deploy the system before the next pre-registration period.