

HAI Assignment 1

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Assumptions:

The student is familiar to Pingala portal and IITK academics.

We are just integrating the Course Recommendation system in it.

Screen 1:

The screenshot displays the 'Student Add & Drop Application' page in the Pingala portal. The interface includes a sidebar with navigation options like Dashboard, Academic Fee, Academic Management, and Academics. The main content area shows a form for student details (Roll No., Academic Status, Department, Major, Programme, Applied Credits, Minor) and a table for course applications. The table has columns for S. No., Course Id, Course Name, Section, Instructor, Course Type, Course Nature, Credits, Branch, DUGC/DPGC, Remarks, Status, and Action. The page also features a top header with the Pingala logo, a user profile, and a navigation menu.

The whole interface and functionality are same as of Pingala portal.

After clicking the “request course” button the screen will change to “Screen 2” which will have AI system for course recommendation.

Screen 2:

The screenshot displays the 'Student Add & Drop Application' interface. At the top, a red header bar contains navigation links like 'Quick Links' and 'Have a problem?'. Below this, a breadcrumb trail shows the user's path: 'Academic Management > Add-Drop(Active 2025-26/1)' > 'Student Add & Drop Application'. A status bar indicates the user is accessing the page as a 'Student'. A search bar labeled 'Search Course' is positioned above the main content area. The 'Recommended Course' section lists five sample courses (CSE300 to CSE304) with their respective attendance requirements and project/exam status, each accompanied by an 'Add' button. To the right, the 'AI Recommendation' panel includes 'Quick filters' (Exam based, No attendance, Project based), a text prompt field for course details, a character count, a 'Max suggestions' slider set to 12, and an 'Apply Recommendations' button. Footer text at the bottom states 'Suggestions auto-generated. Verify before applying.' and 'Showing 1-12 of 12 courses'.

This screen contains the recommendation AI system that recommends courses to student. Initially this screen will not show any courses. It shows courses only after students clicks “Apply Recommendations” button. If no match it shows message “No strong matches found - kindly adjust filters or browse electives”.

The recommendation is based on the “Quick filters”. The student can also write up their prompt to get the personalised course recommendation.

The “Max Suggestion” slider will tell the AI system about number of courses to be recommend.

The “Search Course” is a predictive search field that will show the courses based on text input as in Screen 2.A.

Here, the student can select the “Add” button to add that course. After clicking the “Add” button the above “Search Course” field will get updated according to “Screen 3”.

Screen 2.A :

The screenshot displays the 'Student Add & Drop Application' interface. At the top, a red header bar contains navigation links: 'Quick Links', 'Have a problem?', and a user profile icon labeled 'Name---'. Below the header, a breadcrumb trail reads 'Academic Management > Add-Drop[Active 2025-26/1] > Student Add & Drop Application'. A red banner below the breadcrumb states 'You are accessing this page as role >> Student'.

The main content area features a search bar with the text 'cs6'. Below the search bar, a list of course IDs is shown: cs616, cs670, cs602, cs690, cs637, and cs666. To the left of this list is a red button labeled 'Recommended Course'. Below the course IDs, a section titled 'Recommended Course' contains five course entries, each with an 'Add' button:

- CSE300 — Sample Course**
Attendance: Required • Project based
- CSE301 — Sample Course 2**
Attendance: Not required • Lecture based • Exam based
- CSE302 — Sample Course 3**
Attendance: Not required • Project based • Non-exam
- CSE303 — Sample Course 4**
Attendance: Required • Lecture based • Exam based
- CSE304 — Sample Course 5**
Attendance: Not required • Project based • Non-exam

At the bottom of this section, a note reads 'Suggestions auto-generated. Verify before applying.' and a status indicator shows 'Showing 1–12 of 12 courses'.

On the right side of the interface, a sidebar titled 'AI Recommendation' is visible. It includes a section for 'Quick filters (pick any)' with three options: 'Exam based' (checked), 'No attendance', and 'Project based'. Below this is a text input field for 'Tell us more (prompt)' with the placeholder text 'Describe the kind of course you want — topics, workload, assessment style, timing...'. A character count '0/400 characters' is shown. A 'Max suggestions' slider is set to '12 suggestions'. At the bottom of the sidebar is a red button labeled 'Apply Recommendations'.

When student searches a particular course using “Search Course” field, that will show the courses based on text input.

And if student taps on option then screen will change to Screen 3.

Screen 3:

Quick Links ▾ Have a problem? Name---

Student Add & Drop Application

Academic Management > Add-Drop/Active 2025-26/1 > Student Add & Drop Application

You are accessing this page as role » Student

ID : CS698Y Course Name : Human-AI Interaction

Course Type : Course Nature : Credits : 9

Apply

Recommended Course

AI suggests courses using your degree plan, past courses, grades & interests - not personal data. Refine with filters and prompts.

CSE300 — Sample Course 1 Attendance: Required • Project based • Non-exam	Add
CSE301 — Sample Course 2 Attendance: Not required • Lecture based • Exam based	Add
CSE302 — Sample Course 3 Attendance: Not required • Project based • Non-exam	Add
CSE303 — Sample Course 4 Attendance: Required • Lecture based • Exam based	Add
CSE304 — Sample Course 5 Attendance: Not required • Project based • Non-exam	Add

AI Recommendation

Quick filters (pick any)

- ☒ Exam based
- ☐ No attendance
- ☐ Project based

Tell us more (prompt)

Describe the kind of course you want
— topics, workload, assessment style, timing...

0/400 characters

Max suggestions

12 suggestions

This screen will get updated after the student clicks “Add” button of the recommended courses. OR When student searches a particular course using “Search Course” field in previous screen.

In this screen the details of selected course will be shown along with a “Apply” button to apply for that course. This will also show Prerequisite for that course if any.

After applying a course, a pop will show that “course is added, to check visit previous screen”.

HAX Guideline Implementation — Pingala Course Recommender

G1 - Make clear what the system can do

Implemented: Yes

How: Screen 2 shows “Recommended Courses” label with red colour, displays the banner: “AI suggests courses using your degree plan, past courses, grades & interests - not personal data. Refine with filters and prompts.” and text prompt placeholder: “Describe the kind of course you want - topics, workload, assessment style, timing...” This clearly indicating below section will show courses recommended by AI system.

G2 - Make clear how well the system can do what it can do

Implemented: Yes

How: A global disclaimer is visible: “**Suggestions auto generated. Verify before applying.**” We can also show relevance tags on cards (High / Medium / Low) if desired.

G3 - Time services based on context

Implemented: Yes

How: The recommender is invoked only when the user clicks “Apply Recommendations, edits the prompt, or adjusts filters”.

G4 - Show contextually relevant information

Implemented: Yes

How: Recommendation cards show “course name, code, credits” and relevance tags; Quick Filters and the Prompt box let user's narrow results; predictive search helps find specific courses.

G5 - Match relevant social norms

Implemented: Yes

How: Language, labels, and tone match Pingala’s formal academic style (e.g., “credits”, “prerequisite”, “Apply”).

G6 - Mitigate social biases

Implemented: Yes

How: You explicitly state in the banner that the AI uses degree plan, past courses, grades & interests and “**not personal data**”.

G7 - Support efficient invocation

Implemented: Yes

How: “Request Course” button on the registration page and accessible prompt/search box in Screen 2. The courses will only be recommended when student clicks the “Apply Recommendation” button.

G8 - Support efficient dismissal

Implemented: No

Why: Users can avoid invocation but once the recommended course will show there is no single-click dismiss.

This is because the current Pingala system works the same. After applying a course the student remains on the same page (the course is added to the list on previous page).

So, to keep the familiarity same for the current users of Pingala, we did not add a dismissal option.

It can be added as a “Close” Icon on the top right of “Recommended Course” section.

G9 - Support efficient correction

Implemented: Yes

How: Quick Filters, the Prompt box (with the new descriptive placeholder), Max Suggestion slider, and predictive search let users refine recommendations iteratively.

G10 - Scope services when in doubt

Implemented: Yes

How: When there are no matches, the UI shows a fallback message (“No strong matches found - kindly adjust filters or browse electives”).

G11 - Make clear why the system did what it did

Implemented: Yes

How: Each recommended course displays written rationale (“attendance required”, “project-based”, “non-exam”, etc).

G12 - Remember recent interactions

Implemented: Yes

How: Session memory saves the last filters, last prompt, and recently accepted/rejected suggestions and preloads them when the panel is reopened.

G13 - Learn from user behaviour

Implemented: Yes

How: Learning is based on accepted and rejected courses which is used to personalize future recommendations across sessions.

G14 - Update and adapt cautiously

Implemented: Yes

How: Screen will display small notices when recommendation logic changes and offer an “old vs new” comparison for a limited time.

G15 - Encourage granular feedback

Implemented: No

Why: I did not include feedback options such as thumbs-up/thumbs-down or reason selection for individual course recommendations because: “Time-sensitive portal use” meaning Pingala is mainly used during course registration, where students prefer quick actions. Adding rating interactions could slow them down.

Future scope:

Feedback could be added in later iterations with simple per-course options (👍/👎) and optional reasons like “Already completed” or “Not relevant”). This would let the recommender adapt over time while keeping the UI clean.

G16 - Convey the consequences of user actions

Implemented: Yes

How: The Max Suggestion slider controls number of results along with quick filters and prompts.

G17 - Provide global controls

Implemented: Yes

How: Options like checkbox, slider, text input will be controlled by student.

G18 - Notify users about changes

Implemented: Yes

How: Notifications are planned for new matching courses, recommendation-logic changes, and prerequisite changes via Pingala notifications and optional email.
