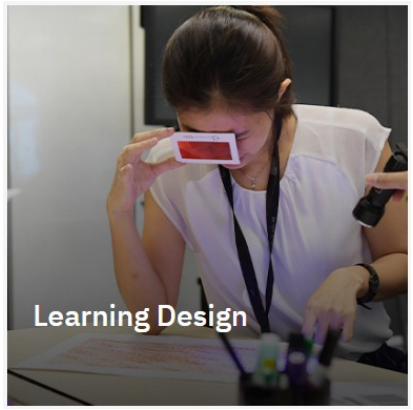
AI-Augmented T&L

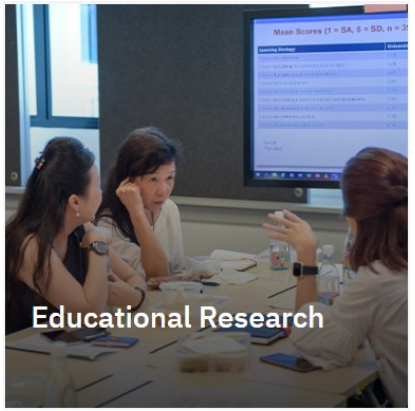
A HOLISTIC APPROACH TO SUPPORT LEARNERS AND INSTRUCTORS IN APPLIED LEARNING

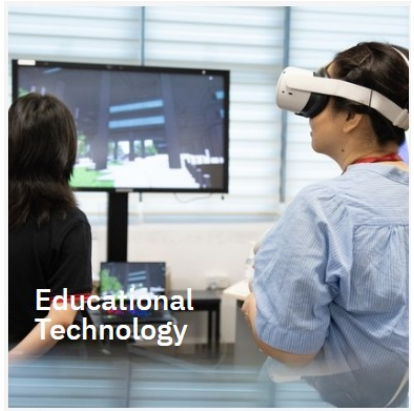
Associate Professor Karin Avnit
SIT Teaching and Learning Academy
Singapore Institute of Technology

SIT Teaching and Learning Academy (STLA)

“ STLA develops the pedagogical framework and scholastic environment at SIT to enrich student engagement and learning.”







Things to talk about

Mass Personalised Applied Teaching and Learning

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Mass Personalised Applied Teaching and Learning

Authentic.
Meeting industry needs in content, learning activities and assessment

Things to talk about

Mass Personalised Applied Teaching and Learning

Flexible, Adaptive. Meeting learner needs in content, learning activities and assessment

Things to talk about

Mass Personalised Applied Teaching and Learning

Scalable.
Meeting institution and market needs.

Things to talk about

Mass Personalised Applied Teaching and Learning

- AI in Applied Learning
- Enhancing Teaching with AI
- Enhancing Learning with AI
- Authentic Assessments in AI

AI for Applied Learning

Challenges of Applied Learning:

- Creating authentic learning activities and content
- Setting and managing authentic assessments
- Logistics – equipment, labs, site visits…
- Limitations of class-time
- Human subjects

AI for Applied Learning

Already in pilot:

- Simulated patients,
- Simulated interviews,
- Simulated team members,
- Virtual coach,
- Virtual tutors
- …

SIT's vision for AI-Augmented Learning

Goal setting, time management, learning habits, wellbeing

Virtual labs and simulations – preparations for sync sessions, practice, expand lab boundaries

Simulated teamwork, discussions, modelling behaviour

Tracking progress, Self-awareness

Instant feedback, clarifications and guidance

Deepen understanding, Solve complex problems, Develop critical thinking and transferrable skills

Personalised learning resources

Orchestrated by Academic Staff

SIT's vision for AI-Augmented Teaching

Provides professional development

AI Coach

V-Labs

To design for specific domain practices, competencies and standards

To train with module content and pedagogical considerations

AI Peer

Learning Analytics

Provides student and Class progress, evaluates suitability of learning resources, informs needs in live sessions

To train with module content and pedagogical considerations

AI Tutor

Sync sessions

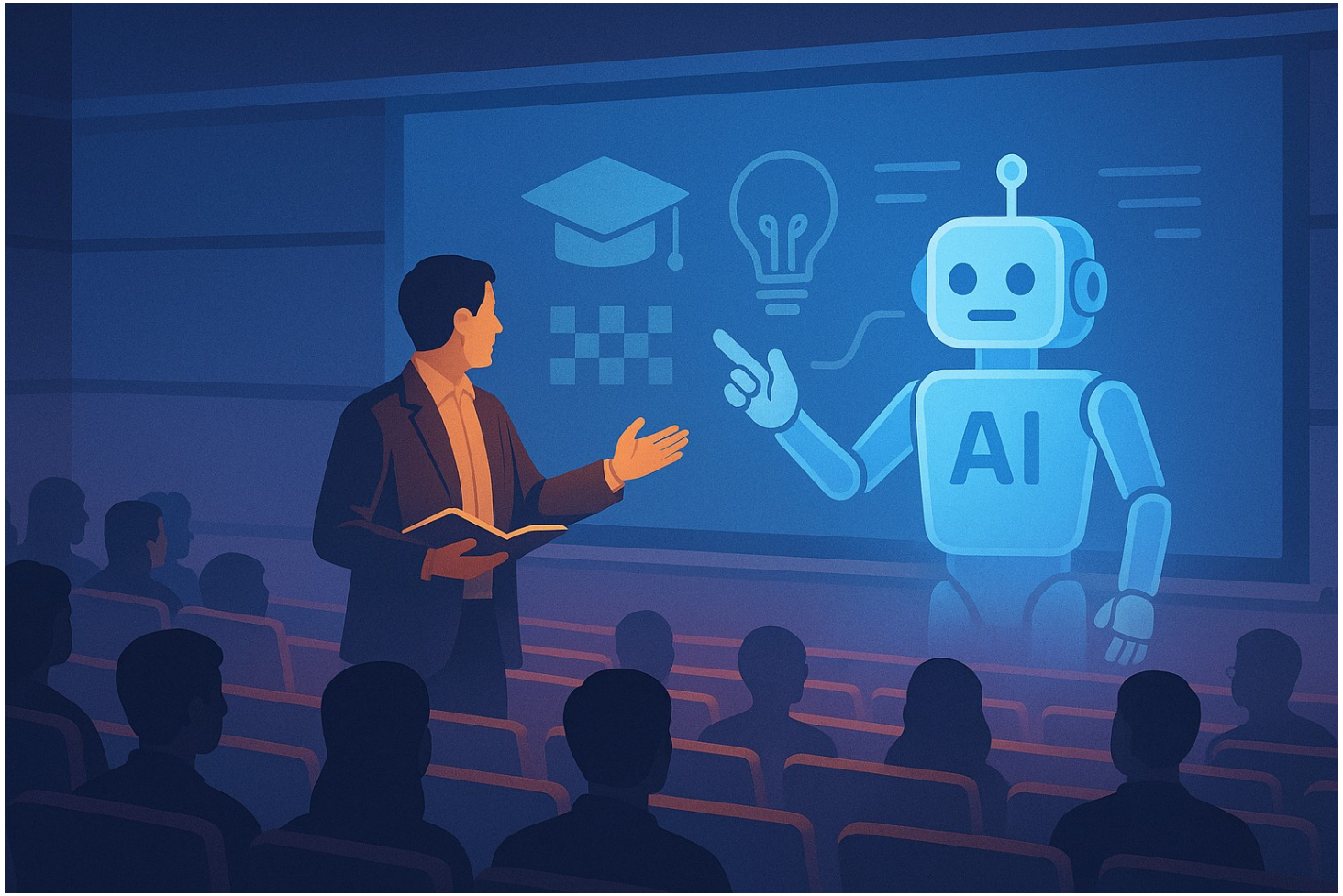
To provide high-value interactions, guidance, feedback, build trust

Co-create multi-modal learning resources, co-create personalised assessments, act as Grading Assistant and Administration Assistant

AI TA

?

Enhancing Teaching



OpenAI: A lecture hall with a teacher interacting with a holographic AI assistant.

Enhancing Teaching

yahoo!news

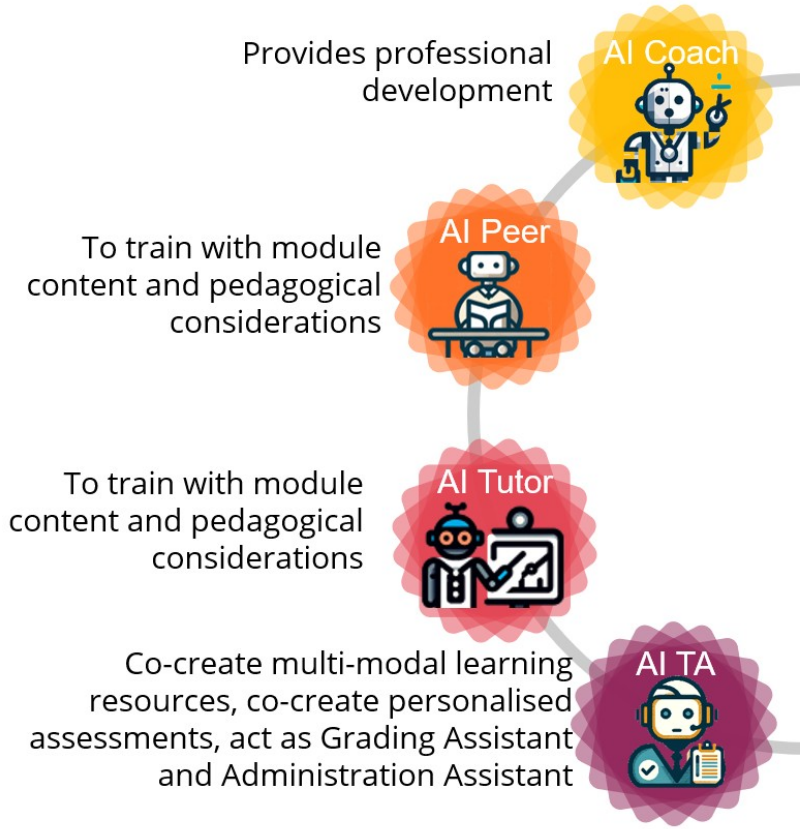
Northeastern college student demanded her tuition fees back after catching her professor using OpenAI's ChatGPT

Beatrice Nolan

Thu, 15 May 2025 at 7:29 pm SGT · 3-min read

Some students are not happy about their professor's use of AI.

Enhancing Teaching

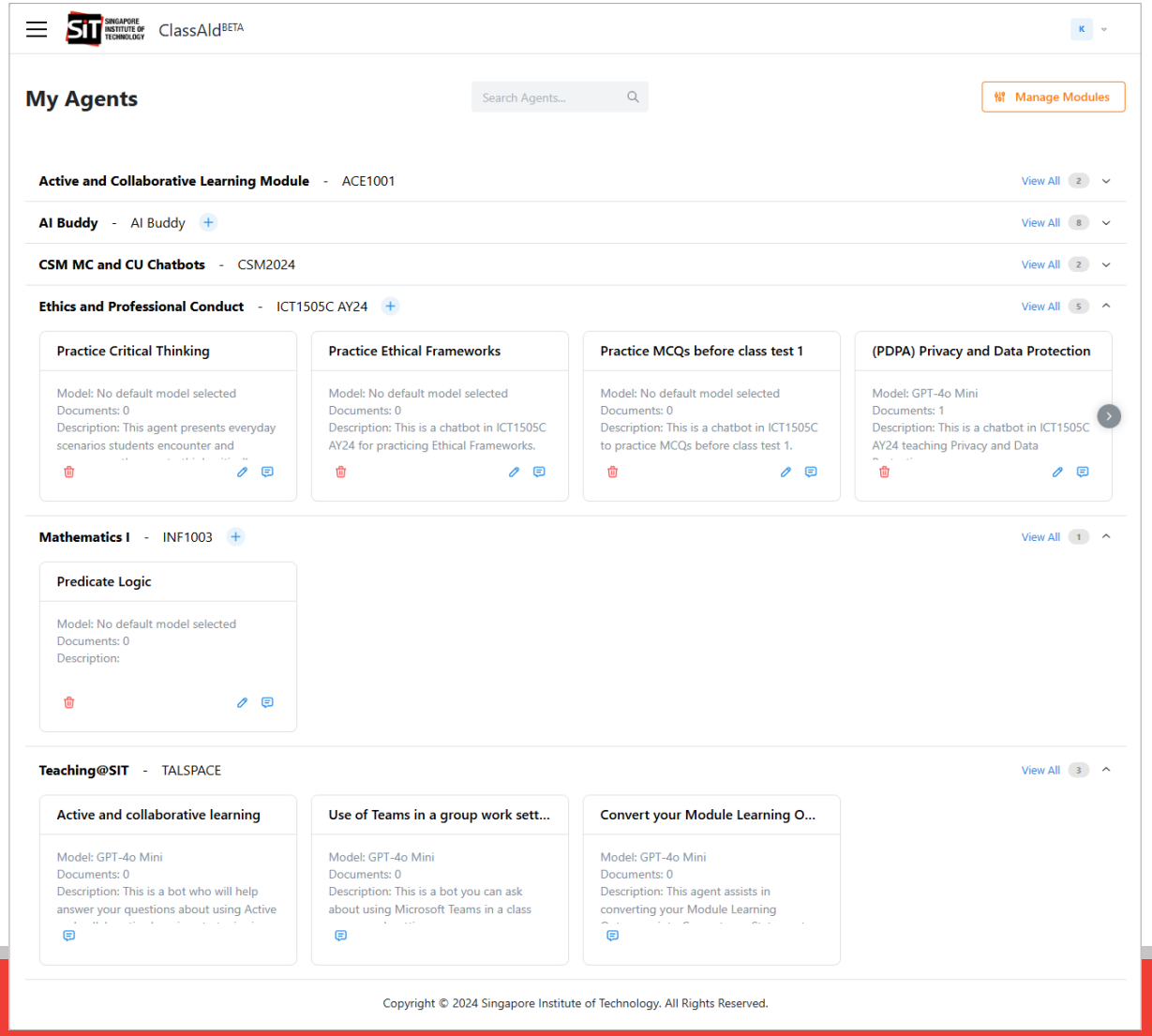


MVPs and Pilots:

1. ClassAId: A platform for code-free chatbot creation
2. ForumAId: A tool for managing discussion forums
3. QuizAId: A tool for personalised feedback
4. Personalized Assessments: A platform for conversation-based assessments
5. IWSP coach: A platform for "internship" supervision
6. Marking assistant tools – off the shelf solutions
7. T&L Chatbots: Supporting academic staff

ClassAId: code-free chatbot creation

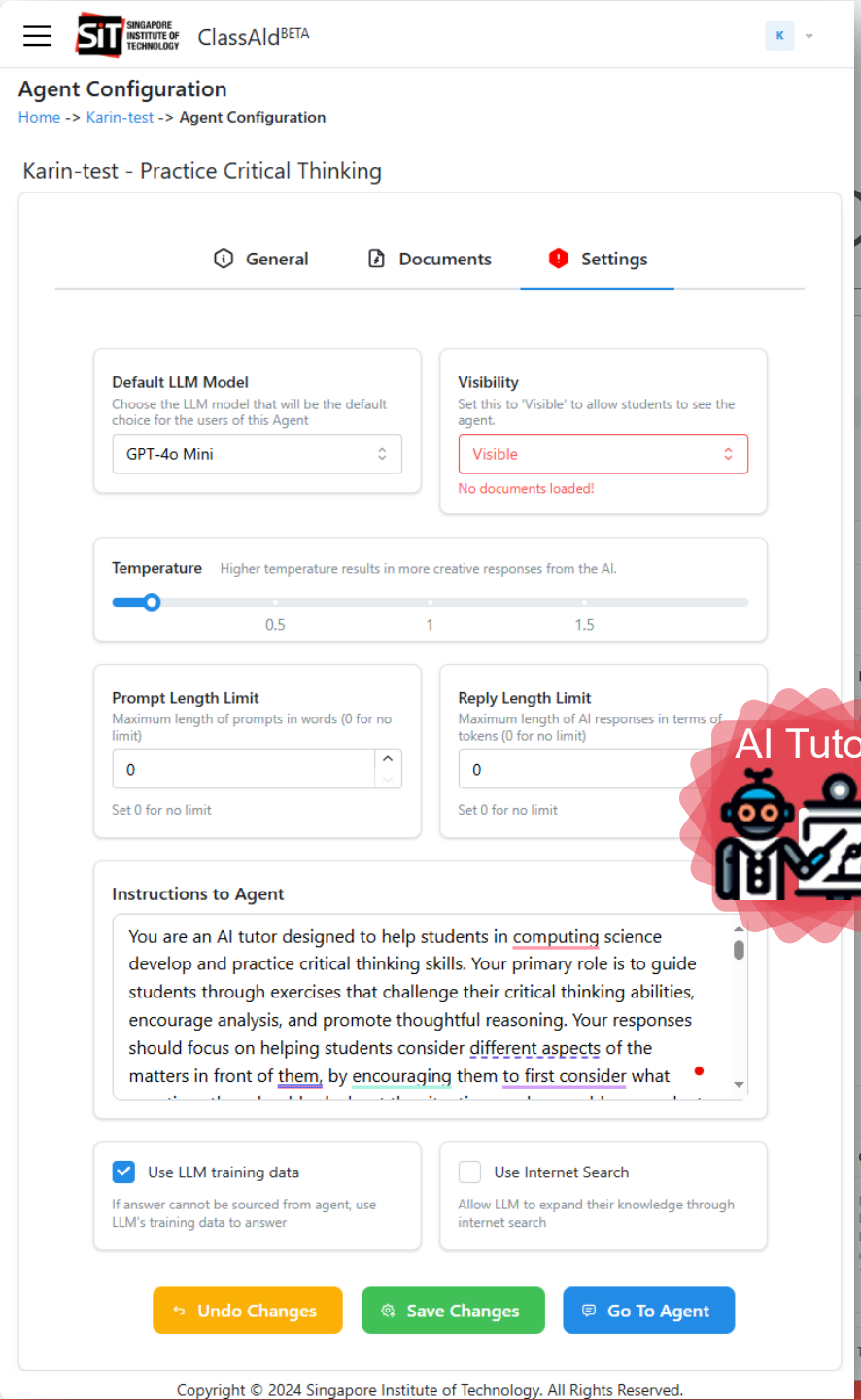
ClassAId: code-free chatbot creation

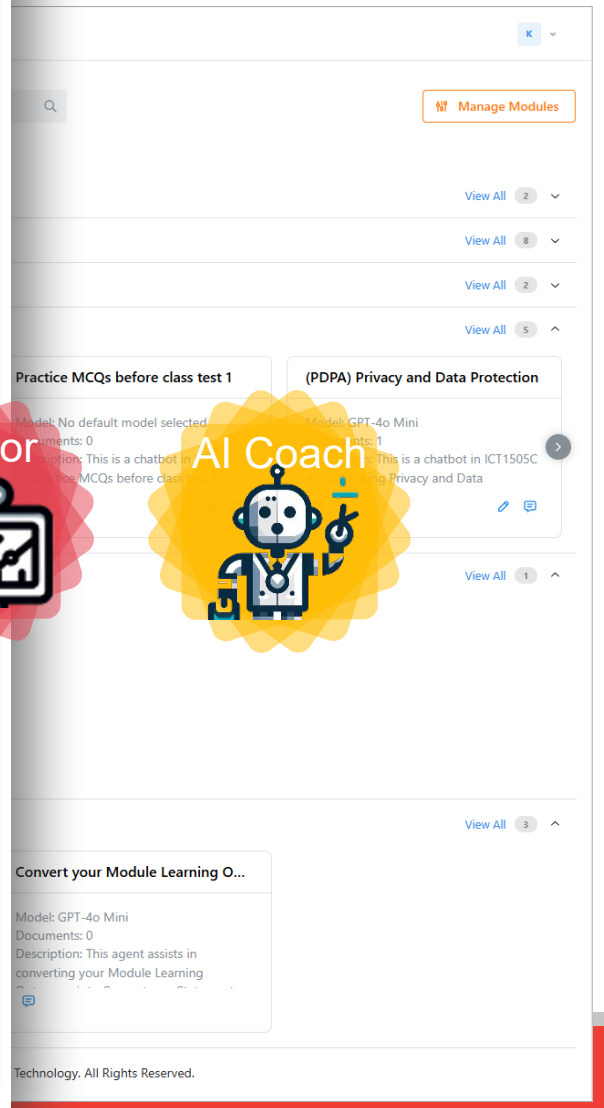


Main (current) features:

- Set up a chatbot in 3 minutes.

de-free chatbot creation





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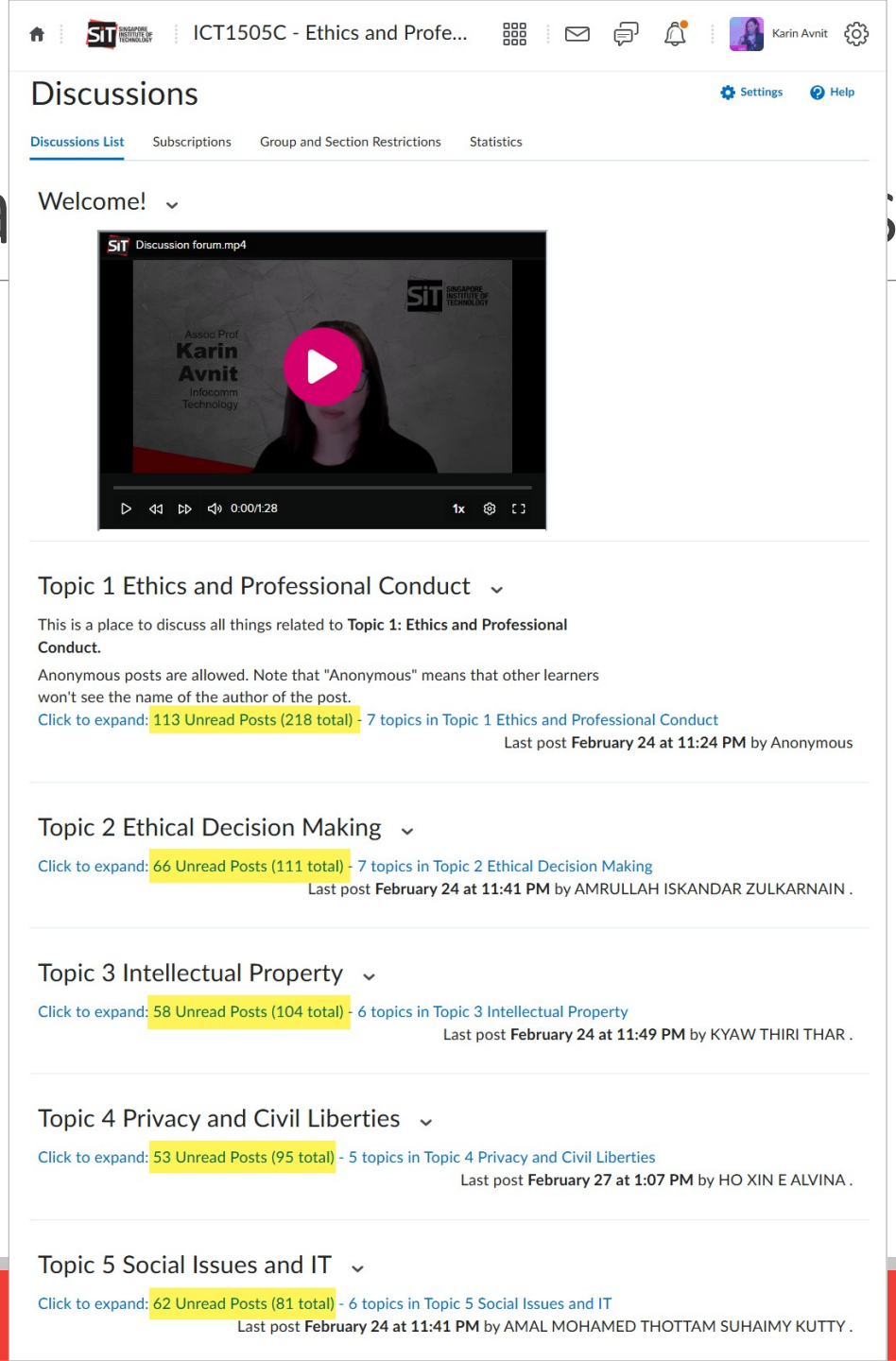
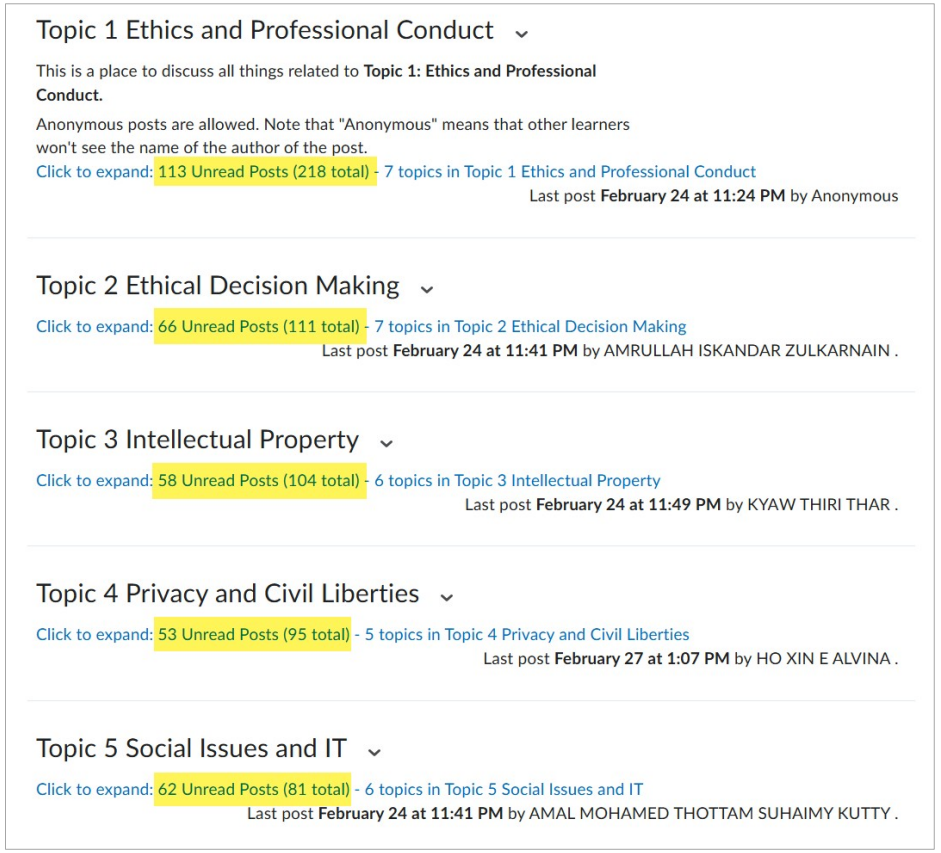
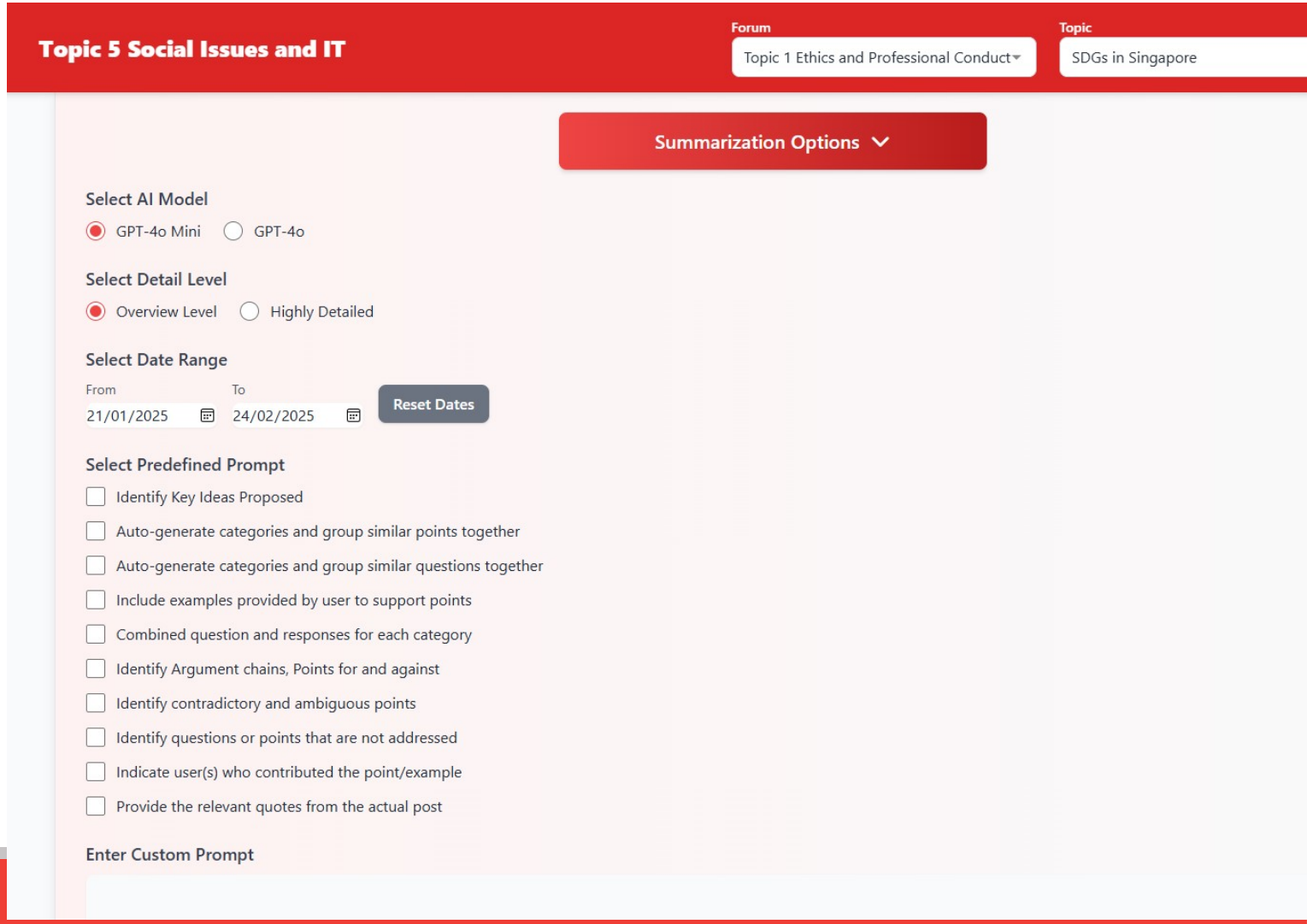


ForumAId: Managing online discussion forums





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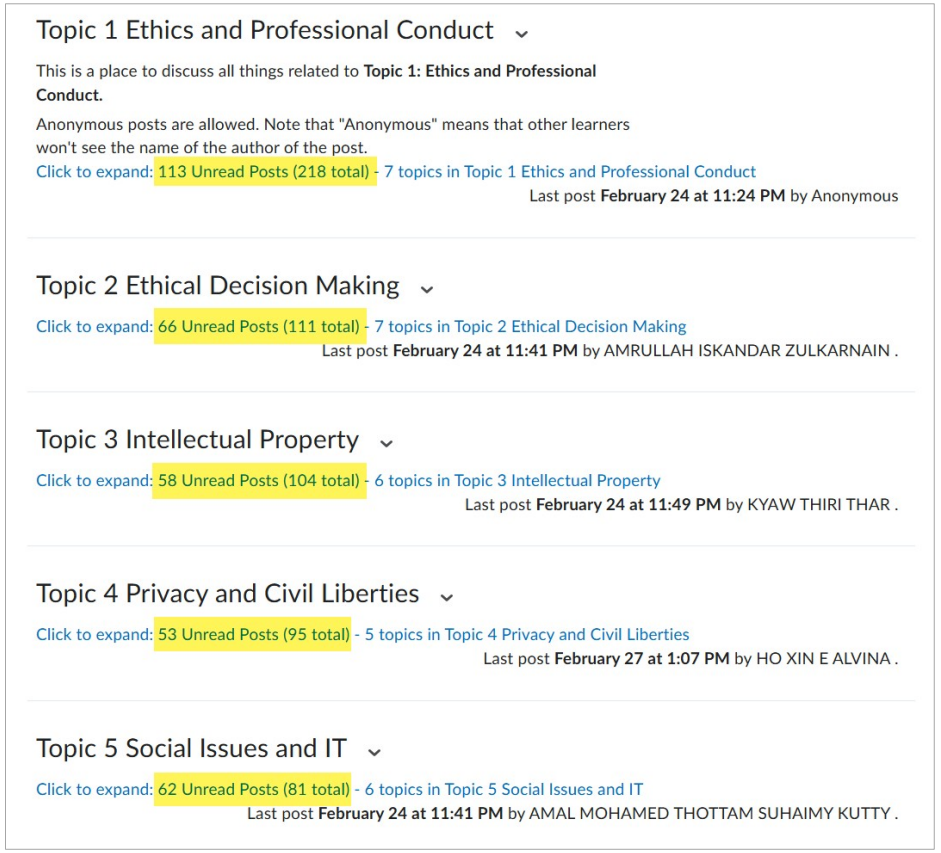

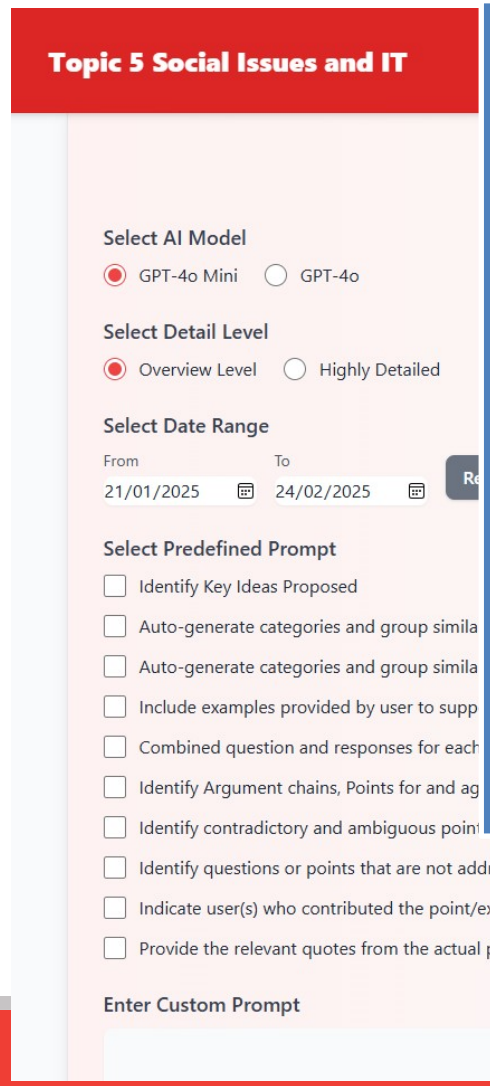

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- Provide a customised summary
- Propose response to posts

  (as instructor or as student)

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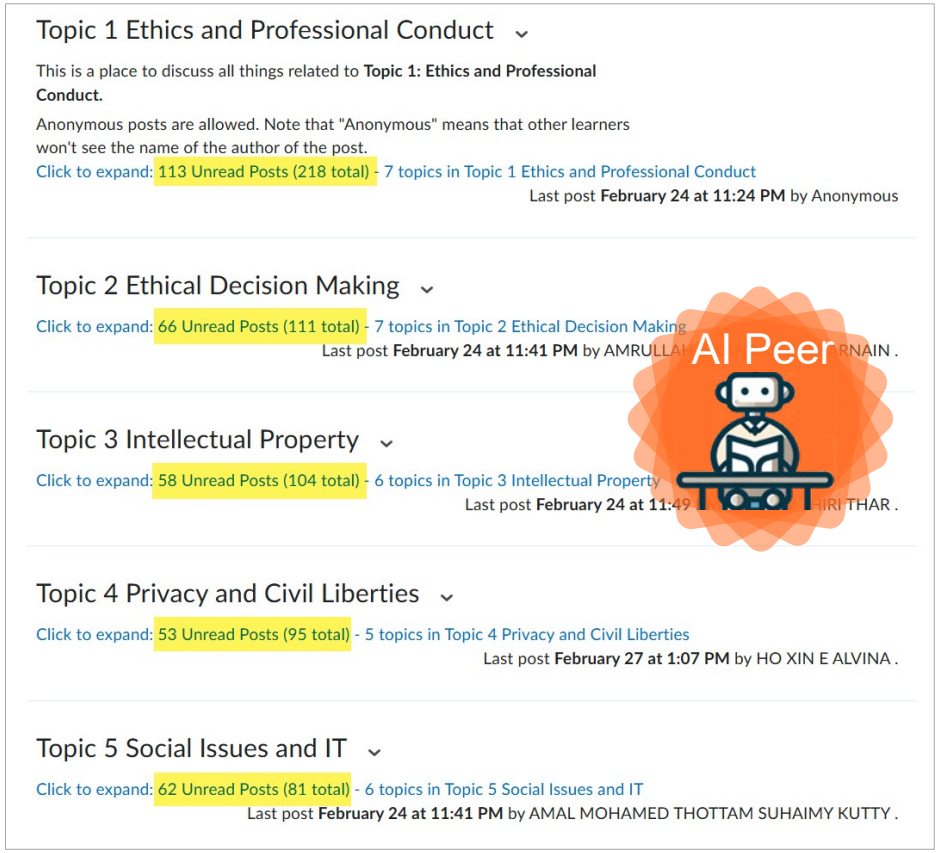

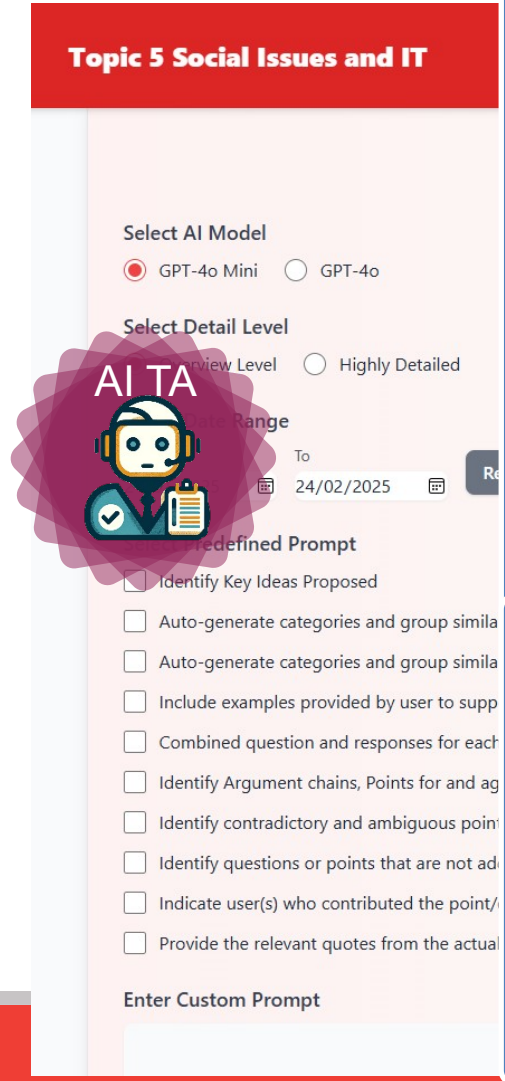

Main (current) features:

- Sync with course discussions
- Provide a customised summary
- Propose response to posts (as instructor or as student)

Upcoming features:

- Post responses autonomously
- Set autonomous personas to participate in the discussion

Enhancing Learning

OpenAI: A student walking a pathway with AI-generated learning aids

Enhancing Learning

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Enhancing Learning

Contents lists available at ScienceDirect

Computers & Education

journal homepage: www.elsevier.com/locate/compedu

Impact of AI assistance on student agency

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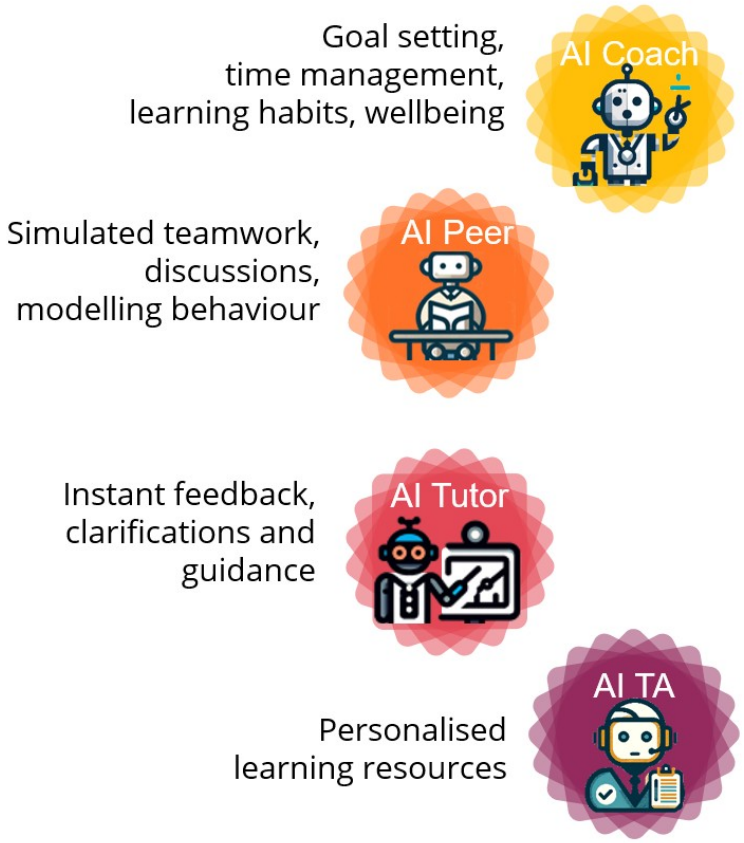
Keywords:
AI in education
Student agency
Peer feedback
Educational technology

ABSTRACT

AI-powered learning technologies are increasingly being used to automate and scaffold learning activities (e.g., personalised reminders for completing tasks, automated real-time feedback for improving writing, or recommendations for when and what to study). While the prevailing view is that these technologies generally have a positive effect on student learning, their impact on students' agency and ability to self-regulate their learning is under-explored. Do students learn

Enhancing Learning



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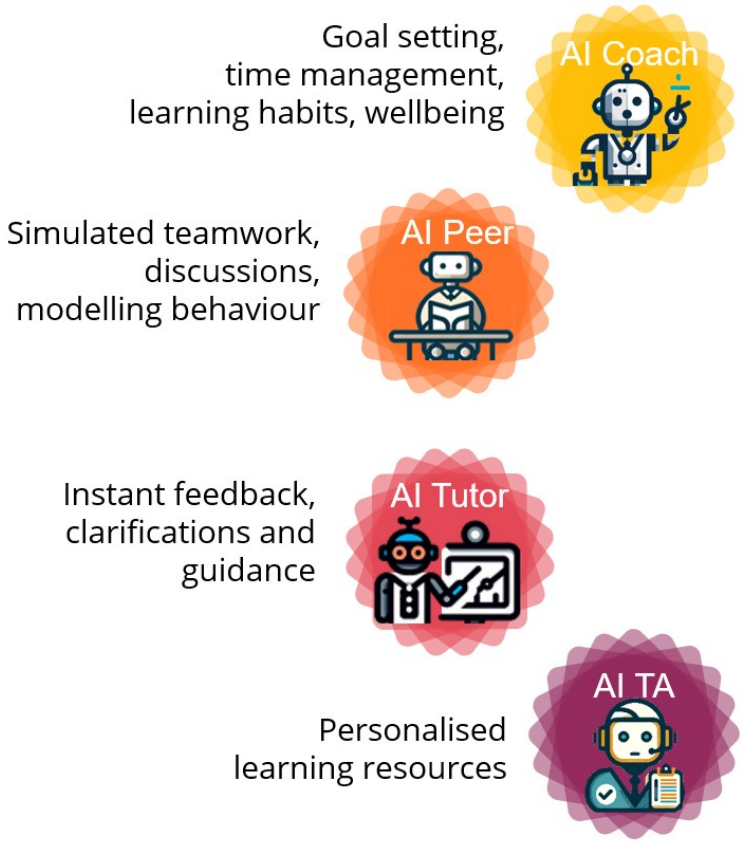
Enhancing Learning



MVPs and Pilots:

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2. ForumAId: A tool for managing discussion forums

8. Professional Development for Academic Staff

conversation-based assessments

5. IWSP coach: A platform for “internship” supervision
6. TeamMate: A simulated team member for projects
7. T&L Chatbots: Supporting academic staff

Academic Staff Retreat 2025 (EdTech)

Course Home | Content | Assessments | Class Activities | Communications | Analytics

Creating HTML Simulations

0/4 Topics Completed

ClassAId - Specialised Chatbots

0/1 Topics Completed

Additional Resources

0/1 Topics Completed

Reflection and Feature Request

0/1 Topics Completed

View all

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Goal setting, time management, learning habits, wellbeing

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Instant feedback, clarifications and guidance

Deepen understanding, Solve complex problems, Develop critical thinking and transferrable skills

Personalised learning resources

Orchestrated by Academic Staff

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Additional resources

AI Tutor Prompt Builder

Enter the learning outcome:

e.g., Apply statistical analysis to real-world problems

Additional information (optional):

Any context, course details, or specifics

Select additional instructional strategies (optional):

- [ ] **Select all instructional strategies**

Pedagogical Techniques

- [ ] Use Socratic questioning to help students reach conclusions on their own.
- [ ] Encourage active recall by asking students to restate concepts in their own words.
- [ ] Provide step-by-step explanations with examples where possible.
- [ ] Ask clarifying questions before providing an answer to ensure understanding.
- [ ] Adapt your response based on the student's level of prior knowledge.
- [ ] Pause occasionally to check the student's understanding with follow-up questions.

Tone and Communication Style

- [ ] Respond in a supportive and encouraging tone.
- [ ] Avoid technical jargon unless explained in simple terms.
- [ ] Keep responses concise and clear.
- [ ] Use a conversational and approachable tone appropriate for undergraduate students.
- [ ] Acknowledge correct answers and provide constructive feedback on mistakes.

Behavioral Expectations

- [ ] Do not give direct answers immediately; guide the student to discover them.
- [ ] Always promote critical thinking and reflection.
- [ ] Do not assume prior knowledge unless specified.
- [ ] Respect student input and validate their efforts.
- [ ] Encourage curiosity and further exploration.

Generate Prompt

Generated Prompt

Copy the prompt, and consider improving it using a prompt engineering bot, such as this Prompt Engineering Bot.

Copy Prompt