

DIGIEDUHACK SOLUTION CANVAS

Title of the solution:

AI-Powered Mentorship

Team name:

Concept AI

Challenge addressed:

Human + AI in Education

Challenge category:

Emerging Technologies for Education

Background of the team:

(multiple selections possible in case of mixed teams)

Higher Education Students

Researchers

Professionals

Teachers

Primary School Students

Secondary School Students

Others (please specify)

Solution description

What is the final product/service/tool/activity you're proposing? What are its main elements, technologies and objectives? Could you please include a brief implementation plan with some key overall milestones, resources required and eventual barriers foreseen?

How could your solution be used to enhance digital education nowadays? How could its success be measured?

I have created the educational app Concept, which has already reached over 5,000 students. The application offers a concept-by-concept learning approach across various subjects such as Science, Math, AI, and more. The new Mentor AI project, proposed for the hackathon will allow students to schedule personalized sessions with an AI mentor trained on specific concepts / learning content (courses / articles), providing real-time, targeted support. While initially designed as part of the Concept app, Mentor AI has the potential to become a standalone product that can integrate with other educational tools (schools?). This project stands out for its ability to deliver precise, concept-driven guidance, which aligns with the growing trends of personalized learning and the use of AI in education.

Main Elements are:

- AI Mentor Sessions: One-on-one, concept-focused mentoring.
- Scheduling & Personalization: In-app scheduling for tailored learning.
- Concept-Specific AI: Providing precise, concept-driven responses for more tailored support.

Technologies: Natural language processing & Conversational AI. Data Analytics to optimize the experience.

Implementation Overview:

- Data Preparation & AI Training (3 months): Train AI on existing concepts and additional data.
- Scheduling & Video Conferencing (4 months): Develop the scheduling system and integrate video conferencing.
- Testing & Refinement (2 months): Conduct beta testing and optimize the AI.
- Launch & Updates (1 month): Launch Mentor AI and refine based on feedback.

Barriers include ensuring smoothless video integration. Success will be measured by improved student engagement and learning outcomes through feedback and analytics.

Target group

Who is/are the target group/s of your solution and how will they benefit from it? Why is your solution relevant to them? how do you plan to engage these groups so you fully meet their specific needs?

The target group for Mentor AI consists of students using the Concept application (<http://conceptai.com>), which serves over 5,000 students globally and continues to grow. These students engage with a wide range of educational content and often require personalized, on-demand support to master specific concepts.

Mentor AI is highly relevant as it offers tailored, flexible learning experiences, allowing students to schedule sessions based on the exact topics they are struggling with. This precision ensures focused and efficient learning. To engage these students, we will integrate an easy-to-use scheduling system within the app, making it convenient for them to access Mentor AI whenever they need assistance. Additionally, continuous feedback will be used to refine the AI's responses, ensuring that it adapts to the students' evolving needs and remains an effective tool for personalized learning. This on-demand, concept-specific approach promotes deeper understanding and greater student engagement.

To enhance engagement, we will incorporate progress tracking features that enable students to track their improvement after sessions with the AI mentor, fostering a sense of accomplishment. Regular feedback loops will ensure the AI evolves to meet their needs, keeping students motivated and focused throughout their learning journey.

Impact

How will your solution catalyse changes in education and what impacts will it have at social and environmental level? Could you provide examples or scenarios illustrating how such changes and impacts might unfold?

Mentor AI will align with the DigiEduHack 2024 theme by offering personalized, on-demand learning that adapts to each student's needs. This flexible, scalable solution will be particularly valuable in underserved regions with limited access to quality education and resources. With Concept, the educational application already deployed and serving a growing user base in developing countries, Mentor AI will address the need for accessible, affordable educational support. It will provide real-time, concept-based guidance, helping to bridge the education gap for students from diverse socio-economic backgrounds.

Additionally, Mentor AI will support sustainability by reducing the need for physical materials and minimizing the carbon footprint of commuting. It will also feature content related to the environment, including topics like geology, ecology, and sustainability, raising awareness and fostering responsible behaviors among students.

Looking ahead, Mentor AI will address future challenges in digital education by offering scalable, personalized learning solutions. As AI-driven tools grow in importance, it will support millions of students globally, ensuring education remains inclusive and adaptable.

Finally, Mentor AI has the potential to influence education policies, practices, and attitudes, particularly in resource-limited regions. It will encourage the adoption of AI-based learning solutions and promote the use of technology to enhance teaching and learning, creating lasting change in education.

Context

What is the current or future problem you're trying to solve? How does your solution align with DigiEduHack 2024 annual theme?

How does your solution confront the challenge posed by the hackathon organiser and how does it address the challenge category?

The current problem we are trying to solve is that students often struggle to receive personalized, on-demand support tailored to the specific concepts they are learning. Existing educational tools are often too generalized and do not provide the focused, real-time guidance needed for deep understanding, leading to gaps in comprehension and engagement.

Mentor AI directly aligns with DigiEduHack 2024's annual theme (Imagining the digital education of the future) by offering personalized, concept-specific guidance. It allows students to schedule sessions based on the exact topics they need help with, providing precise, real-time support. This approach enhances student engagement, making learning more accessible and effective. Mentor AI supports the vision of a more inclusive and personalized digital education model, helping students navigate the evolving learning landscape with tailored, flexible support

Describe it in a tweet

How would you describe your solution in a short catchy way with maximum 280 characters?

Mentor AI: Access personalized, on-demand sessions with an AI mentor focused on specific learning content. Receive tailored guidance and support to enhance understanding and elevate the learning experience, anytime, anywhere.

Innovativeness

What makes your solution different and original? Are there similar solutions or approaches currently available or implemented by education sector practitioners? If so, why and to what extent is your solution better?

Mentor AI is unique because it integrates with Concept's concept-by-concept learning model, offering personalized, on-demand mentoring that is tailored specifically to each topic. Unlike any existing tools in the education sector, there are no current solutions that provide real-time, concept-specific AI mentoring integrated with a learning platform in this way.

While some AI solutions offer general assistance or tutoring, none are specifically designed to offer targeted, concept-focused support that adapts to each student's exact needs, making Mentor AI a completely new and innovative approach to personalized education.

Transferability

Can your solution partly or fully be used in other education/learning contexts or disciplines? Could you provide any example?

Mentor AI can be easily adapted to various educational contexts beyond the Concept application. For instance, in language learning, it can assist with grammar, vocabulary, and pronunciation, or in fields like environmental science and social studies, it can provide targeted support for complex topics like climate change or global economics.

The versatility of Mentor AI will enable it to be customized for any subject or discipline, offering personalized, on-demand support. By training the AI with content specific to new fields, it will be effectively integrated into a wide range of educational settings. Beyond its role within Concept, Mentor AI will also have the potential to evolve into a standalone product capable of integrating with other educational tools and platforms, making it a flexible, scalable solution across different learning environments.

Sustainability

Once you have a prototype, what are your plans for a further development, implementation upscale and replication of the solution? How do you see it working in the mid- and long term?

Once we have a prototype, we will refine the AI through testing and feedback, then scale by expanding topics and languages to reach a global audience, especially in underserved regions.

In the mid-term, we will enhance Mentor AI within Concept application, supporting more concepts and improving user experience.

In the long term, we aim to integrate Mentor AI with other educational tools and platforms, broadening access to personalized, concept-specific support globally.

Team work

Present the members of your team.

Why are you the perfect team to develop this work and what are the competencies you all bring in so the solution is developed successfully? What is your expertise within the thematic field concerned? Are you planning to continue working as a team in the future? If so, why?

Our team consists of myself and Jonathan. I'm the founder of Concept, a free educational application already available on Android and iOS (<http://conceptai.tech/>). I bring 9 years of experience in Computer Science, with 6 years working at a large EdTech company, along with an additional 2 years of expertise in Machine Learning and AI technologies. Jonathan, on the other hand, has strong expertise in educational content and learning strategies, ensuring our solution is both effective and aligned with students' needs. Together, we're the ideal team to develop Mentor AI. My background in engineering and AI ensures we'll build a smooth, scalable technical solution, while Jonathan's experience in learning design guarantees that the AI will offer focused, concept-based support. We're excited to continue collaborating, combining our strengths to refine and grow the project, with the goal of creating a lasting impact on education.