DIGIEDUHACK SOLUTION CANVAS

Title of the solution:	HUMIND: The mind that thinks with you	**Team name:**	CZ2
Challenge addressed:	DigiEduHack	**Challenge category:**	My learning Resources

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): University students

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?

HUMIND is a cognitive-adaptive AI platform that creates a brainprint of each student, adapts any learning resource to their cognitive style, predicts when they are likely to forget a concept and reactivates it at the ideal moment. It stimulates critical reasoning and provides teachers with a cognitive dashboard of aggregated insights.
Its development follows four phases: defining the brainprint framework, identifying cognitive formats for content transformation, designing Socratic interaction methods and the teacher dashboard, and simulating a pilot to assess its educational impact and benefits.

Context

What is the current or future problem you're trying to solve? How does your solution align with DigiEduHack 2025 annual theme?
How does your solution confront the challenge posed by the hackathon organiser and how does it address the challenge category?

We live in a world rich in educational content, yet learning often remains ineffective because each student learns differently while platforms treat them uniformly. Current adaptive technologies track behavior but don't grasp how the mind builds knowledge. The real limit of digital education is the absence of true cognitive personalization. HUMIND offers a new approach: an AI that learns from the student, creates a cognitive twin that understands their thinking, anticipates challenges, and reshapes materials into the format most natural to their mind—diagrams, dialogues, stories, or simulations. An AI that thinks with the learner.

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?

HUMIND targets a broad but well-defined audience.
Its primary users are university and non-university students seeking tools that help them organize, visualize, and internalize complex concepts while reducing study anxiety and improving learning effectiveness.
University instructors benefit from insights into students' cognitive challenges through aggregated reports and visualizations that make teaching more accessible and inclusive.
Educational institutions—including universities and academies—are interested in innovation and inclusion, and can integrate HUMIND as a complementary platform alongside existing systems such as Moodle.

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?

HUMIND delivers impact across educational, social, ethical, and environmental dimensions by introducing a new learning model centered on the individuality of human cognition.
Educational: It enhances comprehension, supports metacognition, boosts motivation, and reduces confusion and study anxiety.
Social: It promotes inclusion for students with learning differences, such as ADHD or DSA, and narrows the gap between "fast" and "slow" learners through personalized learning paths.
Ethical: It introduces "Cognitive Privacy," giving students control over their cognitive profile and ensuring transparent, responsible use of AI.
Environmental: By converting traditional materials into personalized digital formats, it reduces paper usage and encourages sustainable practices.
Practical scenarios—Giulia in Law, Marco in Engineering, and Sara with learning disabilities—illustrate how HUMIND adapts to diverse cognitive needs, offering concrete and meaningful benefits.

Describe it in a tweet

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

HUMIND – The mind that thinks with you.
The AI that transforms every resource into your language and makes your learning personal.
#HUMIND #Human#Mind#PersonalLearning #GenAI#AI

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?

HUMIND introduces a new educational paradigm: co-learning intelligence, an artificial mind that evolves alongside the student.
Key innovative elements:
* Brainprint: the first representation of the student's way of thinking.
* Cognitive Morphing: content that transforms into the individual's cognitive, subjective, and personal language.
* Neural Co-Learning: AI is not just a teacher: it thinks alongside the student.
As in Alan Turing's famous experiment "in which the human being can no longer distinguish whether the answer is a machine or a human," HUMIND takes this concept further: not through imitation, but through harmony, cooperation between the human mind and AI.

Transferability

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

HUMIND can be applied in:
* Universities → study support, personalized teaching.
* High schools → inclusion for students with different cognitive systems.
* Corporate training → personalization of content based on professional profiles.
* Online platforms → large-scale training programs.
The brainprint and cognitive morphing approach can be adopted in all educational contexts.

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?

HUMIND's sustainability is threefold:
* Educational sustainability: It promotes continuous, motivating, and personalized learning.
* Ethical sustainability: Transparent model, with cognitive data under full student control.
* Operational sustainability: It is a scalable conceptual solution, designed to easily integrate into existing systems, with a potential freemium model for students and licensing for institutions.

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 four second-year Economics students at the Magna Graecia University of Catanzaro:
Elena Persampieri – elena.persampieri@studenti.unicz.it
Martina Spagnolo – martina.spagnolo001@studenti.unicz.it
Iris Critelli – iris.critelli@studenti.unicz.it
Giada Maruca – giada.maruca@studenti.unicz.it
Our expertise comes from direct experience: we are not external theorists—we are the first to face the very problems we aim to solve. Through our academic journey, we understand how students learn, what tools they lack, how to structure complex materials, and how studying can be made more effective and inclusive.
We want an AI that does not do the work for us, but helps us do it better: one that enhances our study skills, supports us, and works alongside us rather than replacing us.
This philosophy is the foundation of HUMIND, born directly from our real-life experience.