SimIA

"Transforming Education through AI and Simulation"

1. Summary

In an ever-changing world, it is imperative that our educational institutions adapt and offer state-of-the-art learning experiences.

Our proposal proposes to eliminate and replace the current system of university assessments by focusing on holistic student development. Unlike traditional assessments, we combine the innovation of AI with the critical need to improve competency-based assessment in higher education. In doing so, we not only create an efficient solution, but also inspire students to develop critical and creative skills that will serve them throughout their lives.

Together, we can transform higher education in Latin America and prepare future generations to successfully meet the challenges of the real world.

2. Context

Higher education in Latin America faces a critical challenge in the development of assessments. For generations until today, they have been limited to mechanical tasks with single and multiple choices, writing essays or answering a question with theory, which does not accurately reflect reality with complex scenarios. Due to their mechanical nature, these assessments face a threat of obsolescence, as they can be easily solved by Artificial Intelligence.

On the other hand, the methodology of this type of assessments not only slows down the process of delivering results, but also limits the development of critical and adaptive skills in students. Also, it requires individual review by teachers to subsequently provide poorly personalized feedback to students, which makes the grading process slow.

3. Importance of the solution

It is essential to address this problem since higher education should enable students to face real situations in their respective disciplines.

Therefore, we will focus on using artificial intelligence (AI) to improve the elaboration and development of competency-based assessment, allowing students to develop critical, creative, and adaptive skills efficiently.

In this way, AI not only optimizes assessment, but also frees up time for students to focus on their unique human development and skills, rather than repetitive operational tasks.

4. Detailed proposal

We propose an educational simulation platform aimed at the Peruvian University of Applied Sciences in Peru, designed for each faculty, in which visual elements are implemented and manage to be eye-catching and interesting to capture the student's attention.

Students will have access to realistic and challenging case simulators, which will include updated data and relevant bibliography of their fields of study.

- **Challenging scenarios:** Students will solve complex scenarios that challenge them to apply their critical thinking and human skills, which cannot be replicated by AI. This fosters and enhances decision-making based on real information and the ability to experience emotions in professional situations.
- **Personalized AI feedback:** At the end of each simulation, students will receive highly personalized AI-generated feedback, which includes recommendations based on their choices during the scenario. For example, the AI could suggest alternative choices and explain how they would have improved outcomes. Which will help learners understand their mistakes and improve their skills.
- **Healthy competition:** the platform will rank students based on their performance in the simulations, fostering a competitive environment, but without penalizing those with lower scores.

  The final grade will not be based on the student's position in the simulator, it will evaluate their performance based on their decision making and their ability to face the challenges posed.

5. Disruptive, Innovative and Efficient

Our approach is disruptive, as it transforms traditional assessment into an immersive learning experience. The incorporation of AI and simulation technology offers an innovative approach that allows students to develop specific skills and adapt to the competencies required by their career. It is also highly efficient, as it will automate the assessment process and provide instant feedback, freeing up time for teachers and optimizing response time for students.

6. Realizable

This proposal is feasible, as it takes advantage of existing technology and adapts to the specific learning needs of UPC students according to the career, as well as the professors in terms of their methodology, without losing coherence with the educational objectives established in each Academic Syllabus.

The implementation would require the collaboration of AI experts, educational content development and teachers to create relevant simulations.

Prototype link at Marvel: https://marvelapp.com/prototype/1a5629b4/screen/93073153

Youtube link: https://youtu.be/O2ETWRzMbsU

7. SimIA Prototype Manual

I. Introduction

A. Objectives of the manual

This manual is intended to provide detailed instructions for the use of the SimIA prototype.

B. Purpose of the prototype

The SimIA platform prototype is created for the purpose of transforming traditional assessment into an immersive learning experience.

C. Target Audience

This manual is intended for university students to take assessments at 2 different times, as preparation simulations and as a final course assessment.

II. General definition of the prototype

A. General description of the prototype

The prototype is a test version of a simulator-based evaluation system platform using Artificial Intelligence, Augmented Reality and Virtual Reality.

B. Scope of the prototype

- Welcome guide and first steps for users.
- Two key scenarios: "Continuous Assessment" and "Final Simulation".
- "Continuous Assessment": continuous and adaptive assessment based on learner progress.
- "Final Simulation": Replacement of traditional final exams.
- Levels characterized by increased decision making, designed and enhanced by artificial intelligence.

- Notable features: dynamic, challenging, and innovative.
- Personalized feedback after each simulation.
- Real-world scenarios to gain practical knowledge.
- Virtual rewards in the form of badges to highlight achievements on LinkedIn.

C. Objectives and goals

- Replace current traditional assessments.
- Enhance the learning experience in SimIA.

D. Instructive

Welcome to SimIA, your interactive learning platform. Here are the instructions to get you started:

1. **Step 1: Registration and Login**

   Upon logging in to SimIA, you will be provided with a guide and a welcome message. Follow the instructions to register or log in.

   - **Registration:** The student must register with their institutional email to validate their university and a password.

2. **Step 2: Exploring Key Scenarios**

   SimIA offers two key scenarios: "Continuous Assessment" and "Final Simulation". Here's how they work:

   Continuous Assessment" scenario:

   - This scenario is available from day one.
   - The AI will adapt to your progress as the quarters progress, creating levels that match your competencies.
   - Your continuous assessment will be based on the scores accumulated in these scenarios.

   Final Simulation" scenario:

   - This scenario replaces the traditional final exams and will be available in the last week.
   - You will have a designated time to access, and your performance here will determine your final grade.

3. **Step 3: Levels and Decision Making**

   - Each level is characterized by a higher degree of decision making.
   - These decisions are designed and enhanced by artificial intelligence.

- The goal is to prepare them to face real-world challenges in their respective fields.

4. **Step 4: Exploring SimIA Features**

   SimIA offers several outstanding features:

   - Dynamic: It is always evolving to keep students engaged.
   - Challenging: It will push them to think critically and make strategic decisions.
   - Innovative: It combines artificial intelligence and immersive simulation to enhance their learning.
   - Personalized Feedback: They will receive feedback after each simulation to better understand their choices.
   - Real World Scenarios: They will tackle real-world situations and gain insights from industry experts.
   - Virtual Badges: Upon completion of SimIA, they will earn virtual badges that they can proudly display on LinkedIn, endorsed by their university.

   Start your learning journey with SimIA and make the most of this unique educational experience!

III. Material and resources

A. Device with Internet Connection:

You will need a device, such as a computer, laptop, tablet, or smartphone, with Internet access to access the SimIA platform.

B. Active Web Browser:

Make sure you have an up-to-date web browser, such as Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge, to access SimIA.

C. SimIA User Account:

You will need to register a SimIA account or log in with your university student credentials to access the learning scenarios.

D. Quiet Workspace:

For an effective learning experience, choose a quiet place without distractions where you can concentrate on the simulations.

E. Dedicated Time:

Dedicate sufficient time to explore SimIA scenarios effectively and get the maximum benefit from the learning activities.

F. Headset (Optional):

If you want a more immersive experience, consider using headphones for optimal sound quality during simulations.

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Title of the solution:	SimIA
Challenge addressed:	28h - Transforming education
Team name:	SOLELILU
Challenge category:	Emerging technologies for educatior

Solution description

Please describe your solution, its main elements and objectives as well as a brief implementation plan with some key overall milestones, resources required and eventual barriers foreseen. What is your final product/service/tool/activity? How could the solution be used to enhance digital education in the your challenge area? How could the successof the solution be measured? How will the solution provide benefits to the challenge owner?

"SimIA" is a solution that aims to transform higher education in Latin America through artificial intelligence and simulation. It is an immersive assessment platform, and its key elements include educational simulation with challenging scenarios, personalized feedback, and healthy competition. The implementation plan involves AI experts, content developers, and educators, with milestones experienced in their respective fields.
Its success will be measured through improved academic performance, student and teacher satisfaction, and enhanced job opportunities for students on LinkedIn.
This solution benefits higher education by enhancing the quality of learning, developing real-world relevant skills, and preparing students for the job market. It can be used to enhance digital education by offering a more effective and adaptive learning experience.

Context

What is the problem you are facing?
What is the challenge that you are solving?

The problem we are facing is the outdated and ineffective assessment methods in higher education in Latin America. We aim to transform this by introducing SimIA, an AI-driven immersive simulation platform that promotes critical thinking, decision-making, and real-world skills in students, providing a solution to the challenge of improving the quality of competency-based education.

Target group

Who is the target group for your solution?
Who will this solution affect and how?
How will they benefit?

The target group for SimIA is university students starting at UPC. This solution will directly impact these students by transforming their learning and assessment experiences. They will benefit by gaining access to immersive, AI-driven simulations foster critical thinking, real-world decision-making skills, and emotional intelligence. This will prepare them better for their respective fields and improve their job readiness. Additionally, students will receive personalized feedback, enabling them to understand their strengths and areas for improvement. SimIA's integration with LinkedIn will help students showcase their achievements, giving them a competitive edge in the job market. This innovative solution aims to revolutionize education by enhancing the quality of competency-based learning for students.

Impact

What is the impact of your solution? How do you measure it?

SimIA's impact is broad and measurable. It transforms education through immersive simulations, enhancing students' critical thinking and problem-solving abilities for real-world challenges.

The impact is quantified by assessing improved problem-solving skills. SimIA expedites assessments, offering instant personalized AI-driven feedback, reducing evaluation time compared to traditional methods.

It cultivates healthy competition, fostering a competitive spirit without penalizing lower-performing students, measured through engagement and performance tracking.LinkedIn badges provide tangible recognition. The number of students displaying these badges and their job market succes

Describe it in a tweet

Describe your solution in a short catchy way in maximum 280 characters

Revolutionizing education with AI-driven simulations, fostering critical thinking, personalized feedback, and LinkedIn recognition.

Innovativeness

What makes your solution different and original?
Can anything similar be found on themarket? How innovative is it?

SimIA stands out for its fusion of AI, AI-driven simulations, personalized feedback, and industry recognition. This approach offers a level of innovation not commonly seen today, revolutionizing traditional assessments and fostering real-world competencies.

Transferability

Can your solution be used in other contexts?
What parts of it can be applied to other context?

Yes, this educational simulation solution with AI can be adapted to other contexts, such as training and workforce development. Realistic simulations can be created for various fields, including sales, legal proceedings, and more, enhancing skill development and decision-making.

Sustainability

What is your plan for the implementation of the solution and how do you see it in the mid- and long term?

In the short term, we will test SimIA at UPC, refining content and UX, including improving AR maps. In the medium term, we'll replace the current assessment model. In the long term, we'll expand to other universities, seek accreditation, and promote lifelong learning.

Team work

Explain why you are the perfect team to develop this work and what are the competencies you all bring in so the solution is developed successfully. How well did you work as a team?
Could you continue to work as a team in the future?

We are a team of three marketing specialists with a proven collaborative track record in past projects. Our success and shared vision for future projects demonstrate our ability to work effectively as a team. Additionally, our motivation to implement SimIA at UPC.