



DigiEduHack Solution Miskolc - Solutions for a virtual geological exploration field trip or short internship

**Challenge: Miskolc - Solutions for a
virtual geological exploration field trip
or short internship Challenge 2020**

Traces of reality

Immerse yourself in the world of geological research

A project that allows you to immerse yourself in the world of geological research and prove yourself as a person who is adapted to work in the field.

Team: MGRI SPE team

Team members

Anna Shcherbakova, Anastasia Chuchadeeva and Anna Boyko

Members roles and background

Anna Shcherbakova is captain and analyst

She is 3d years student of The Faculty of Hydrogeology and engineering Geology.

Graduate of the Moscow College of geodesy and cartography MIIGAiK

Anna Boyko is Ideas generator and technical specialist.

She is 1st years student of The Faculty of Hydrogeology and engineering Geology.

Graduate of the Yekaterinburg College of transport construction

Anastasia Chuchadeeva is Designer and technical specialist

She is 2nd years student of The Faculty of Engineering, Prospecting and Mining.

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Solution Details

Solution description

Imagine your favorite quest game and take it to Geology. The student will have to complete a geological route in different locations on the map and special tasks (student will have a geological biscuit, acid, ruler, geological knife, hammer, etc.) in each step there will be theoretical sessions and work with the teacher. Our solution just offers such an interactive service that will allow the student to study in the form of a quest game.

Our solution can be used to improve digital education in geological practices. At present, it is almost impossible to conduct geological practices remotely, but our solution proposes to transfer interactions from face-to-face practice to a remote interactive game format, thereby removing the dependence of geological practices on weather, equipment and epidemiological conditions.

The success of the solution can be measured by the increase in the number of conducted practices, by the number of students taking these practices, as well as by their overall activity during the passage.

Our solution of the problem not only provides the challenge owner with a service that will help improve the skills of employees or teach students remotely, but also make the learning process itself interesting due to gamification.

Solution context

All these problems have appeared due to the unavailability of certain areas, the lack of necessary equipment or its outdated version, weather conditions and epidemiological situations. It can be argued that educational literature and videos are not able to develop the student's full potential. Technologies become increasingly influential components of pedagogy but they does not evolve or modernize. However, the lack of competent interactive learning limits the pedagogical opportunities that we are used to and that have not changed for decades. The results of the study showed that the gap between theoretical training and practice creates a significant gap in the integrity of the student's practical experience for those specialties that need it most.

Solution target group

The target group of our project is all people who cannot access classical education: people with disabilities, students in quarantine, and people who are improving their skills.

Solution impact

The impact of our solution lies in the fact that it will make the educational process more diverse. Most of the existing distance education systems now consist of a repetitive cycle of lectures and practical sessions. In such a system, students most often burn out and lose motivation to learn. The

learning process seems boring to them, which can be seen from the declining student activity during the course. Our solution adds interactivity to this process through gamification. The variety and interactivity in the course will not let the student burn out or get bored. The impact of such a process can be immediately measured by the continued high activity of students during the course.

Solution tweet text

It is interactive geologic service for geologists with gamification elements. The student will have to complete a geological route in different locations on the map. And in each step there will be theoretical knowledge and work with the teacher.

Solution innovativeness

Introduction of gamification in the process of distance education.

Solution transferability

Geology - a set of Sciences about the structure of the Earth, its origin and development, based on the study of geological processes, material composition, structure of the earth's crust and lithosphere by all available methods using data from other Sciences and disciplines. Depending on specialty the student is studying, the teacher can create a course in geophysics, hydrogeology, paleontology, geodynamics, geomorphology, etc.

Introduction of gamification in the process of distance education. It is found in other educational fields: programming and language learning.

Solution sustainability

The plan for the implementation of our solution in the medium term includes the following steps: monitoring the market for services for the creation and maintenance of an interactive site, assessing the financial feasibility of purchasing equipment and creating a site platform, creating a site model (environmental design, tools, equipment, weather factors, minerals, etc. etc.).

In the long term, we plan to implement: creating an interactive library and museum on the site, choosing potential locations for practice, creating a portal for the exchange of information and homework between a teacher and a student, maintaining a portal database, familiarizing everyone with instructions for using the interactive site and portal, development of a system and a schedule for visiting the site for practical training.

Solution team work

Teamwork is very convenient and useful from the point of view of social adaptation. We are comfortable working in the company of other people, as we can distribute tasks among the participants. This will reduce the time to complete the task. Each of us knows our responsibilities and understands our effectiveness. We're doing great together.