

BACKGROUND

By 2030, half of humanity will be living in extreme water stress. Groundwater makes up 99% of all liquid fresh water and when drought comes, groundwater is the only fresh water available in many regions. We need more skilled groundwater scientists (e.g., hydrogeologists) to solve this crisis. However, globally, the numbers of graduating hydrogeologists are declining at a time when the need has never been greater. The GW-Project was started to help reverse this trajectory by providing high quality education for free in many languages to everyone.

In our mission to foster capacity-building to serve global societal needs, the GW-Project has become the largest knowledge repository for free high quality groundwater education. This is an impressive feat because this knowledge is normally hidden behind paywalls, thus inaccessible to most of the global population.

In the 5 years since book publication began, the GW-Project, has positioned itself as a global leader with education provided for children, university students, scientists, practitioners, and members of the public. Key accomplishments include:

- 69 original and 37 preserved books published
- 17 additional books near publication and over 160 more being written
- 95 book translations published & 194 translations underway (60 languages covered)
- 5 interactive learning tools and 2 learning modules released (more in progress)
- Over 50 high quality educational short groundwater videos (more on the way)
- 1,000 volunteers working in 70 countries globally
- Books downloaded in every country globally with over 3.5 million readings.

SKILLS CATEGORIES

Artificial intelligence, Data analysis, Software development, UI design, Website development

DETAILS

The objective of this project is to develop an AI search function that efficiently searches educational materials on The Groundwater Project's website. This function will be designed to answer user questions by retrieving relevant information from the site's educational content.

Learners will apply their knowledge of AI and web development to create a search algorithm tailored to the specific needs of the website. The project will involve tasks such

as data analysis, algorithm design, and user interface development, ensuring a comprehensive learning experience.

Core tasks:

- Analyze the existing educational materials on the website
- Design an AI algorithm for efficient search functionality
- Develop a user-friendly interface for the search function
- Test the search function for accuracy and efficiency
- Document the development process and findings

DELIVERABLES

The project will culminate in a fully functional AI search tool integrated into The Groundwater Project's website (www.gw-project.org). Learners will also provide documentation detailing the development process and user testing results.

Deliverables:

- Functional AI search tool integrated into the website
- Technical documentation of the search algorithm
- User interface design files

Scheduled check-ins will occur to discuss progress, address challenges, and provide feedback.

PREFERRED TEAM SIZE

4 People

INTELLECTUAL PROPERTY

We would ask students to provide the design to the project for free use and application as long as we so choose. Ownership of the product would be assigned to the Groundwater Project.