



DIGITAL PLATFORM AS THE COMMUNICATION CHANNEL FOR CHALLENGES IN ARTIFICIAL INTELLIGENCE

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Abstract:

The paper presents the implementation of a digital platform that could be used in communication in the future. The Digital Communication uses artificial intelligence that can quickly find solutions to certain problems. When a person discovers a potential problem, artificial intelligence can access the platform, so they can send their solutions from their computer in any corner of the world. Problems and issues in the field of artificial intelligence can be solved through the described platform. Setting project tasks in the mentioned area includes a detailed description of the problem, the deadline by which a possible solution is to be sent and an award for the best solution. The platform can be used both in industry and the education system. The industry can find new experts to cooperate with and the education system, which has been striving for digitalization in recent years, can enable a large number of students to test their skills in the field of artificial intelligence in a simpler way, solving its tasks. Prizes can be set as points in an education system or money in industry.

Keywords: digital platform, artificial intelligence, challenge, solution

1. Introduction

As a consequence of the corona virus pandemic, the world's population has opted to use online platforms to learn and make new business connections [1].

Artificial intelligence, as an area of wide application, is among the most attractive fields in the world [2]. Artificial intelligence can produce many questions and challenges that need to be answered [3]. Individual users can submit their ideas to the problem, which can be a potential solution. In this way, scientists around the world can share their knowledge gained through many years of experience. All registered users can respond to the challenges and thus join in solving the given problem. By not revealing the identity of the company, the platform preserves its privacy, and the potential solution to the problem is visible only to the company and the registered users. This way of communication prevents the use of work of other people, and its additional advantage is a large number of different solutions to one problem.

The popularity of this field is growing from year to year, so the number of educational institutions that are involved in this field is increasing [4]. Professors can set tasks via the platform, while students, as registered users of the platform, can send their examples of solutions and receive points.

2. Platform concept

First of all, it was necessary to create the concept of the platform itself and find adequate programming languages for its creation. Adequate users are identified, as well as the

functions of each type of users. The design of the platform is adaptable to all devices, and the way it is applied depends on the type of a user.

Using Angular with the programming languages HTML, CSS and TypeScript made it possible to create a simple user interface that represents the frontend of the platform. The operations that form the basis of using the platform are *adding*, *viewing*, *modifying* and *deleting* data. These operations are enabled through Laravel, which is a PHP framework. The mentioned framework defines the backend platform. When registering new users or adding new data, the possibility of error is reduced by introducing data validation. In addition, users are provided with tabular access to data that can be sorted and filtered. For communication between backend and frontend, API is used (Fig. 1.).

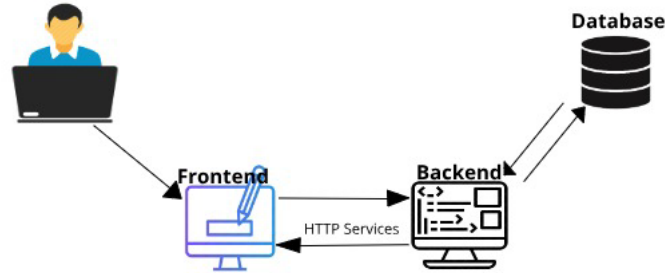


Fig. 1. Platform architecture scheme

The goal was to create a web platform where scientists, professors, students and other people exchange experience about problems in artificial intelligence. Solving of tasks is available to registered users worldwide. This fact enables universities and companies to work in artificial intelligence field and receive solutions to the existing problems.

3. Results and Discussion

A platform has been created where challenges can be set in the field of artificial intelligence. The challenges posed are accompanied by filling in the adequate forms. The challenge must be detailed and in accordance with the platform's regulations. It is necessary to enter the name of innovation, prize, deadline, abstract, overview, discipline, type and image. On active artificial intelligence tasks, registered users can send their own ideas that can be potential solutions. With the requested personal data and descriptions, a file containing the solution needs to be submitted (Fig. 2.).

The screenshot displays a web form titled "Send idea form". It includes several input fields and sections:

- Title ***: A text input field with the placeholder "Enter title *".
- Contact Details**: A section with a dropdown arrow.
- Idea proposal**: A section with a dropdown arrow.
- Attachment**: A section with a "Choose file" button and the text "No file chosen". Below it are "Send" and "Cancel" buttons.
- Abstract**: A text area containing the text: "Discuss classification algorithms with supervised learning: Logistic Regression, Decision Tree, Random Forest, Naive Bayes Classifier, Support Vector Machine, K-Nearest Neighbor (KNN). This means working on the theory behind these algorithms, how they work, criteria and parameters that can be optimized (optimization of hyperparameters), advantages and disadvantages of each algorithm, as well as which libraries are needed to train them in Python."
- Overview**: A section with the text: "The winner of this challenge is with 10 points".

Fig. 2. Send idea form

Many competitions can be organized through this platform where young scientists are able to test their knowledge in this field. Solutions submitted are reviewed by users hired by task owners. Reviewers have no information about the user who submitted the solution. In this way, task solutions can be assessed without bias and the most successful ones can be chosen as *accepted*.

4. Conclusions

Using this platform, communication is achieved between educational institutions around the world and industry in the field of artificial intelligence. The goal of the platform is to find innovative solutions to existing and new problems that arise within this field. In addition, companies can find potential team members in this way, while on the other hand, solvers can gain additional experience and get a chance to work in the world's leading companies.

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