



# Automated Assessment for Student Handwritten Answers

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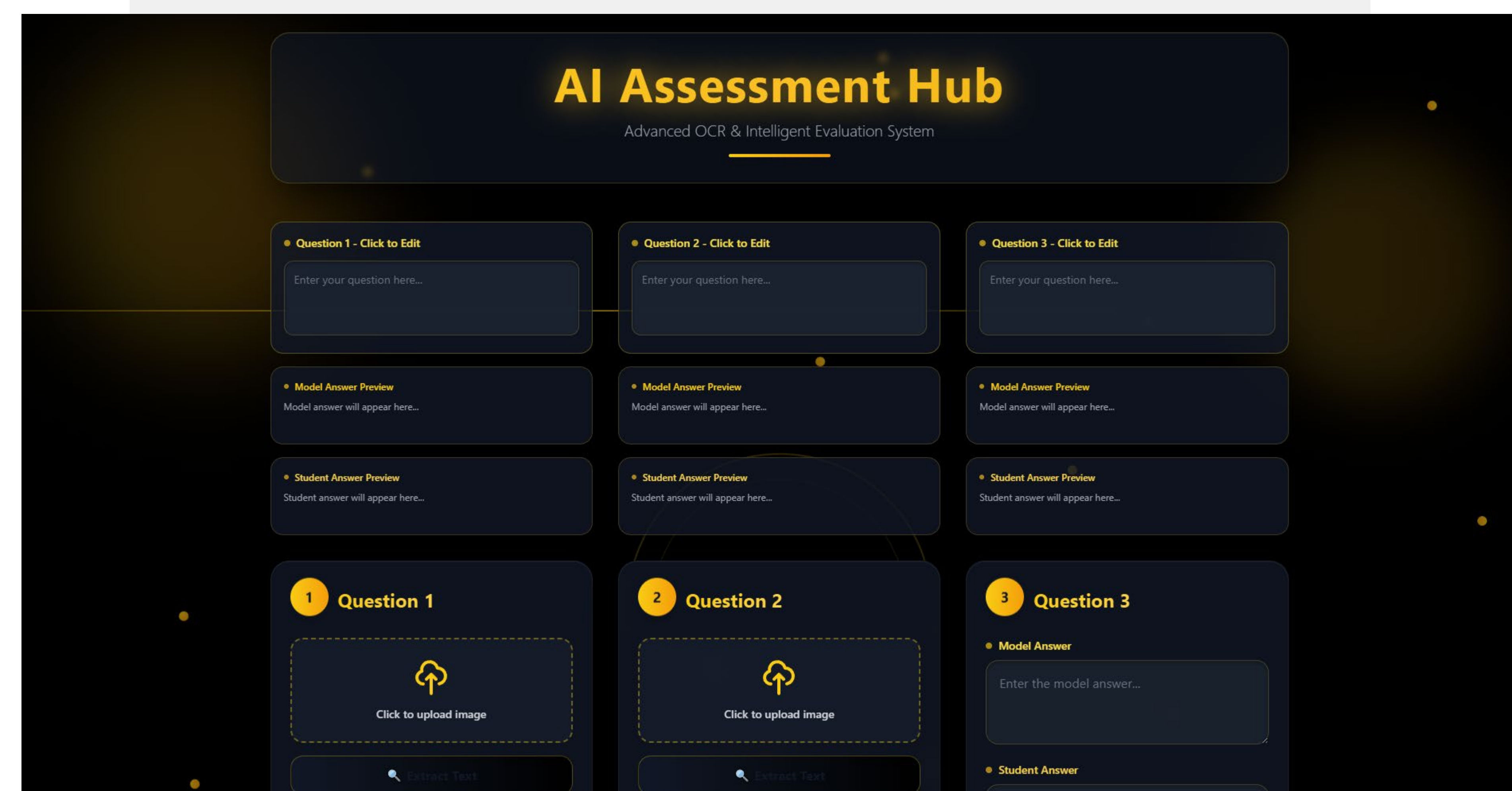
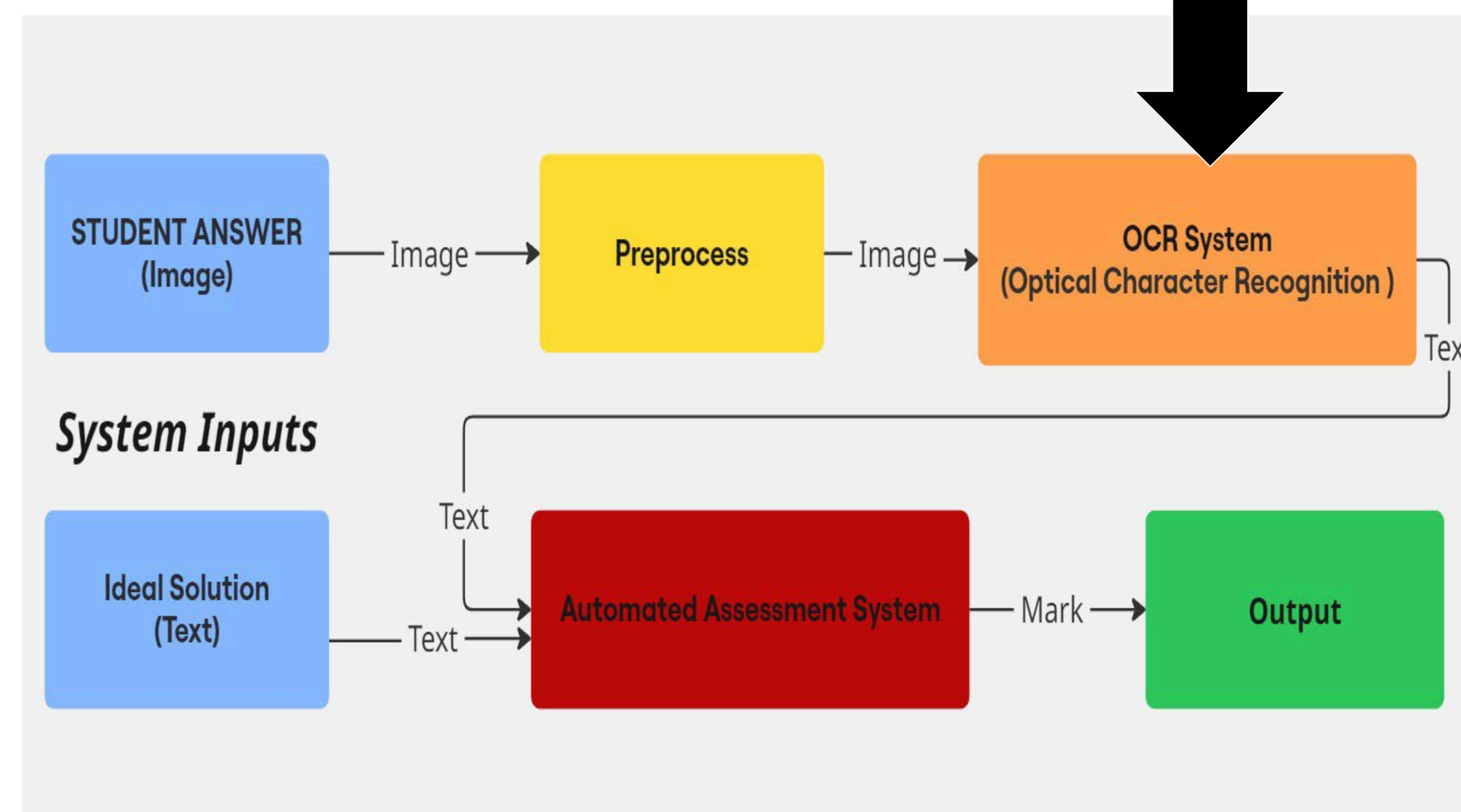


## Introduction/Project Motivation

- In recent years, e-learning and digital education have become more popular because of better technology and the need to easy access to leaning. However, checking handwritten student answers is still a big problem. Grading by hand takes a lot of time, is not always fair, is not always fair, and doesn't work well for large on online classes

## How our project works?

- This project works like a smart system to check student answers. First, it takes a photo of a student's handwritten answer. Then, it changes the handwriting into text using a tool called OCR. After that, it compares the student's answer to the correct one. To understand the meaning, even if the words are different, it uses a method called RAG. This helps the system give a fair score based on how close the student's answer is to the correct answer.



## Project Objectives

- Promote and encourage e-learning and digital examination practices.
- To lay on the foundation for future smart education tools.
- Reduce manual grading effort and improve evaluation consistency.

## Conclusions

1. This project successfully developed a system that evaluates handwritten student answers using OCR and semantic similarity.
2. The results demonstrate that AI can play a key role in improving the speed, fairness, and scalability of student assessment.

## Main Challenges in the Project

- 1. Recognition of Handwriting Paragraph
- 2. Fine Tuning Models
- 3. Data Cleaning

## Future Work

- Integrate with Learning Platforms
- Data Base system for Student marks and ideal solutions
- Support Arabic Language