CSE461: PROJECT ABSTRACT

Automated Quiz Evaluation System

Team Number: 12

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Problem Statement:

Given handwritten subjective answers, the system automates the process of correction by digitising handwritten text into a digital format for

1. easier understanding, and
2. to speed up answer evaluation via machine learning, as far as current systems allow

Solution Overview:

Proposed solution: Build a system with different modules to

- Extract regions of discrete Question-Answer pairs from an image
- Get the answers in plain text from the handwritten submission
- Evaluate the answers against a ‘gold standard’ solution submitted to the system by the course instructor

There would be two types of users: students and instructors. Instructors submit question-answer pairs (in plaintext). Students submit scans of their handwritten solutions. This solution will be fed through the system for automated processing and evaluation. To enable ease of horizontal scaling, each module shall be a containerised application with clearly defined input and output, so new containers can be fired up to handle greater load as required.

Proposed modules to fit the criteria given above could be

- An image segmentation module trained to pick apart relevant answers in the document to correspond to the gold standard
- An OCR Reader, taking in handwritten text as input and plain text as output
- A semantic text-similarity module to compare the student’s solution to the gold standard.