DOC2QUIZ: AI-Based Document Quiz Generator

Abstract:

Creating quizzes from educational documents manually can be time-consuming and prone to inconsistencies. This AI-driven quiz generator leverages natural language processing (NLP) and machine learning (ML) techniques to automate the process, transforming input documents into multiple-choice questions (MCQs) seamlessly. This tool is designed to aid educators, trainers, and learners by producing high-quality, contextually accurate quizzes that are aligned with the content of the given material.

The system ensures that the generated questions evaluate understanding, analytical thinking, and knowledge retention. By analysing key sections such as definitions, problem statements, methodologies, and results, the AI can generate MCQs categorized by difficulty level.

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Problem Statement:

Document Input: Accepts diverse formats like PDFs, Word documents, and plain text.

Content Analysis: Utilizes NLP techniques to extract key information and identify quiz-worthy sections.

Question Generation: Automatically generates multiple-choice questions with one correct answer and plausible distractors.

Customizable Difficulty Levels: Allows users to adjust the complexity of generated questions (easy, medium, hard).

Category Tagging: Associates questions with specific categories or subtopics for better organization.

Review and Edit Options: Provides users with an interface to review, modify, and approve generated questions.

Simple Algorithm for Stock Price Prediction

Algorithm: NLP Pipeline with Transformer Models and GPT-Based Summarization

Expected Outputs:

- Generated Multiple-Choice Questions (MCQs): The AI model will create MCQs based on the input document content.

- Answer Key for the Generated MCQs: Along with the questions, the system will provide a corresponding answer key for validation.