

PREP IQ



AUTOMATIC QUIZ GENERATION

INNOVATING
EDUCATION FOR A
CHANGING WORLD

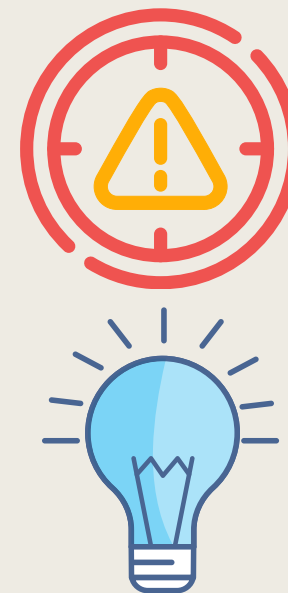
PRESENTED BY
SIVA SWAROOP
SRI CHARAN
CHANDRA SEKHAR
MAHEK VIRANI

WHAT IS PREPIQ

Our project, Automatic Quiz Generation System with Retrieval-Augmented Generation (RAG) Pipeline, addresses these challenges by leveraging advanced Generative AI to automate quiz creation. The system dynamically filters content from diverse educational materials, generating topic-relevant, unbiased questions that align with curriculum standards. The RAG pipeline ensures adaptability, enabling the generation of tailored assessments that can respond to evolving educational needs and diverse student demographics.

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(01)



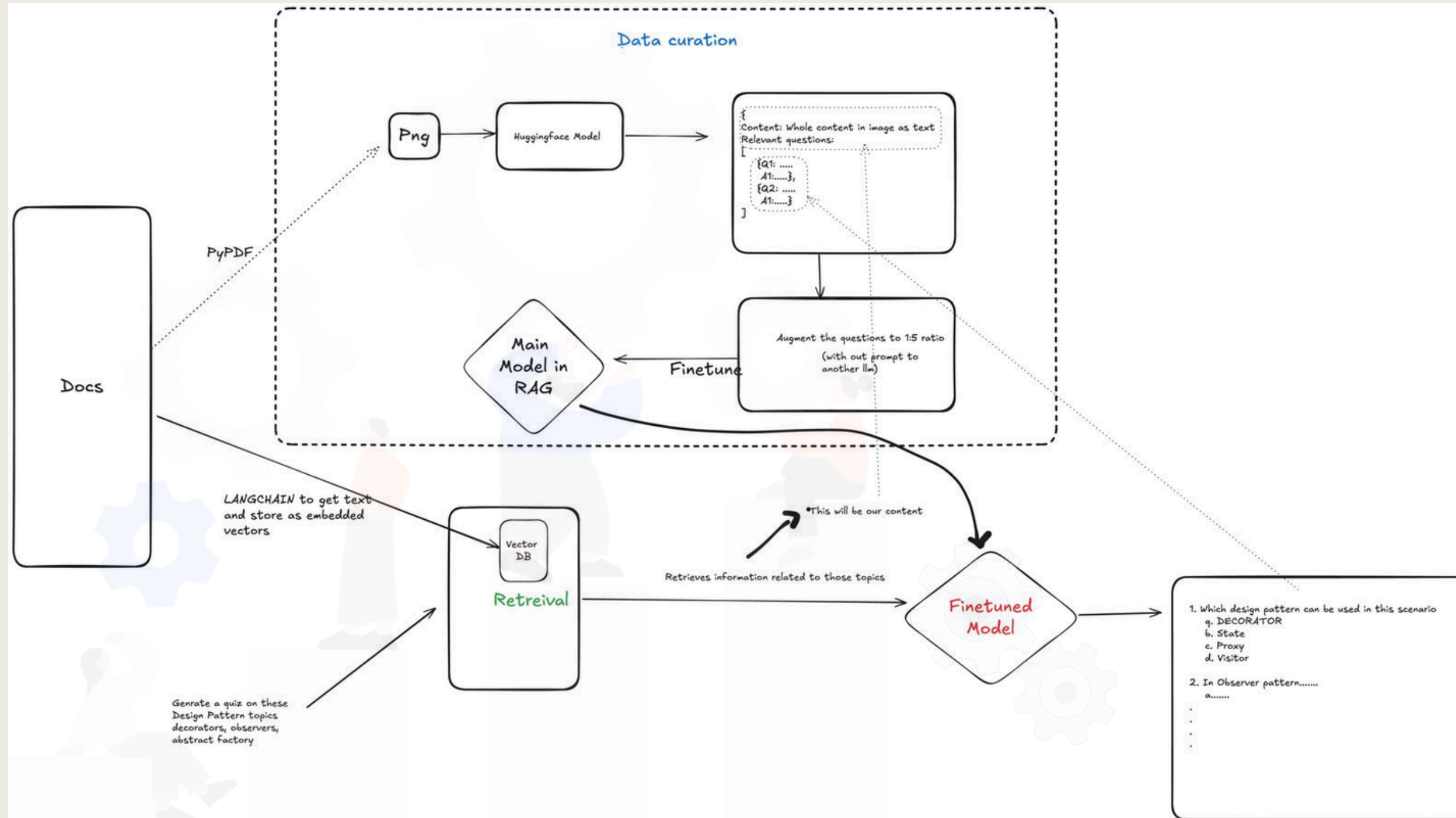
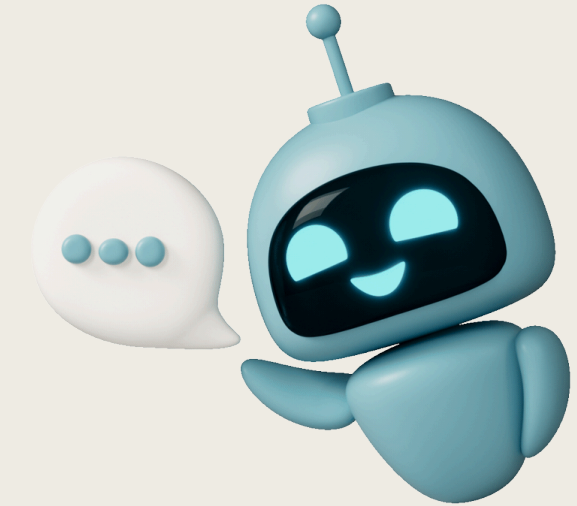
**TRADITIONAL
APPROACHES:**
RULE-BASED
SYNTACTIC PARSING
MANUAL SCORING

OUR INNOVATION:
AI-BASED
UTILIZES RAG
HIGHLY RELEVANT &
CUSTOMIZED

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ARCHITECTURE

CUTTING EDGE
GEN-AI TECH



Key Components:

- **Data Retrieval Service:** Uses FAISS for retrieving relevant educational content from a large database.
- **Question Generation Service:** Uses Gemma for creating quiz questions from retrieved content.
- **Manual Customization Module:** Allows educators to manually customize questions from the automatically suggested types.

(02)

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TECH STACK USED



The PreplQ platform leverages a robust AWS infrastructure to host its FastAPI backend and React frontend. The custom domain, prepiq.online, is managed via Route53 and directs traffic through an Application Load Balancer (ALB)



docker

PyPDF2



Hugging Face



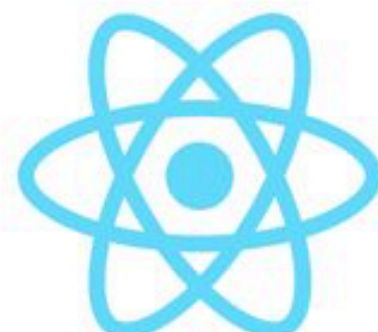
GitHub Actions



redis



NVIDIA



React Native

Faiss



Meta



amazon
web services™



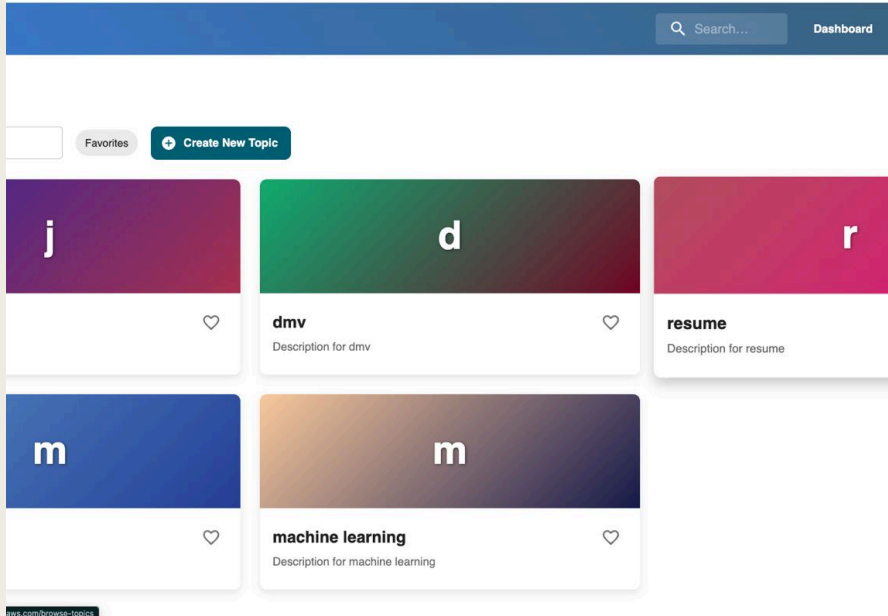
FastAPI

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OUR APPLICATION

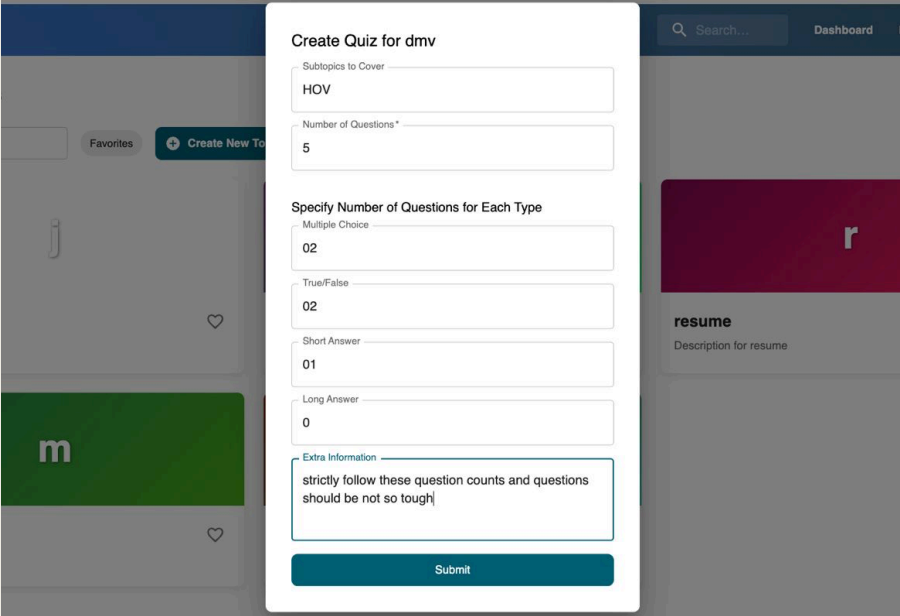
QUIZ GENERATION
AT YOUR SERVICE

(05)



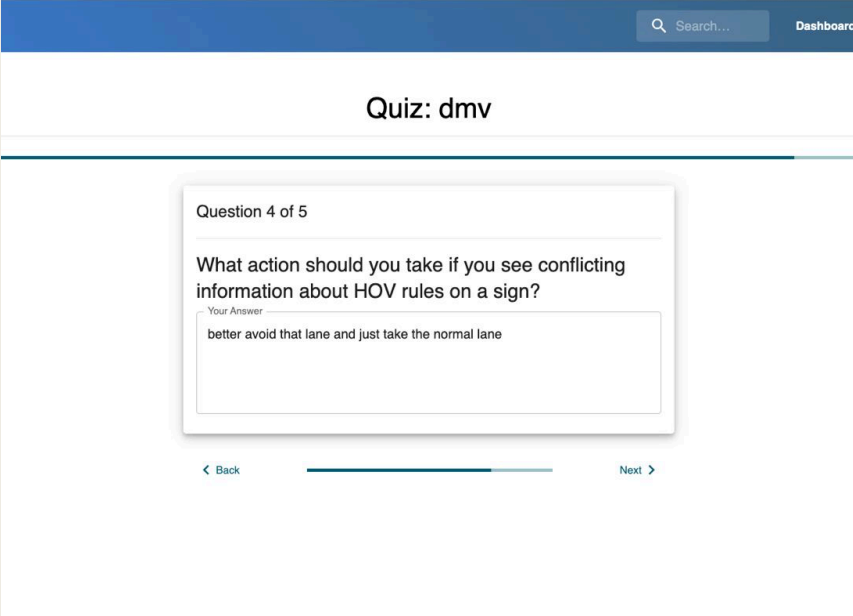
UPLOAD
DOCS FOR
TOPIC

select
Topic



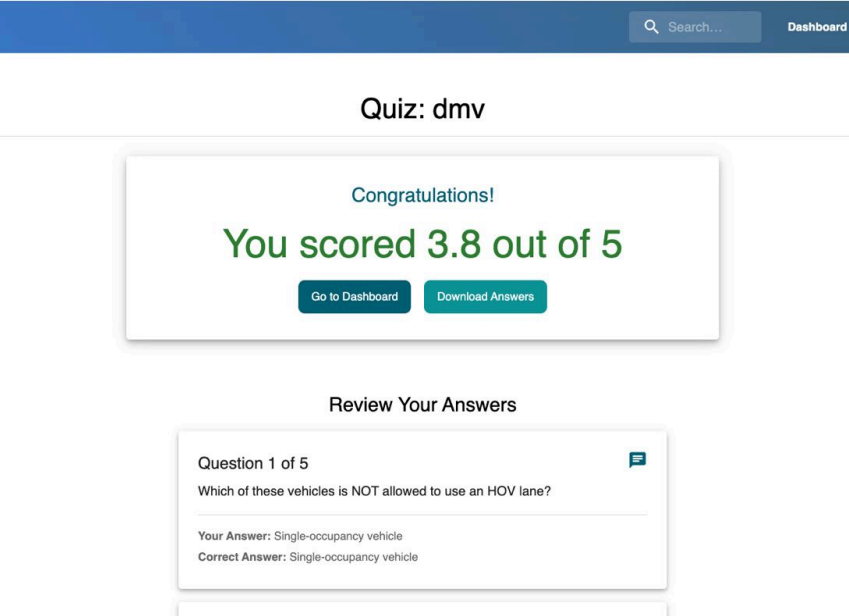
ADD
CUSTOMIZATIONS

Click
Create



PROVIDE
ANSWERS

Next
Question



REVIEW
ANSWERS

Get
Explanations

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SYSTEM PERFOR MANCE



OUR TRACK RECORD REFLECTS OUR
DEDICATION TO EXCELLENCE AND
DELIVERING VALUE TO OUR CLIENTS.

BY THE NUMBERS:

Metric	Description	Avg. Score (0-5)
Groundedness	Alignment with retrieved content	4.4
Instruction Following	Accuracy in fulfilling user prompts (e.g., generate MCQ)	4.7
Answer Quality	Coherence and correctness of generated answers	4.3
Verbosity	Appropriateness of detail without over-explaining	4.1
Subtopic Coverage	Range of subtopics reflected in questions	4

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WHAT'S NEXT FOR PREPIQ



MULTIMEDIA CONTENT
INTEGRATION WITH ADDITIONAL PLATFORMS:
REAL-TIME FEEDBACK MECHANISMS:

VISIT OUR WEBSITE AT
WWW.PREPIQ.ONLINE

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THANKYOU
FOR
LISTENING

