



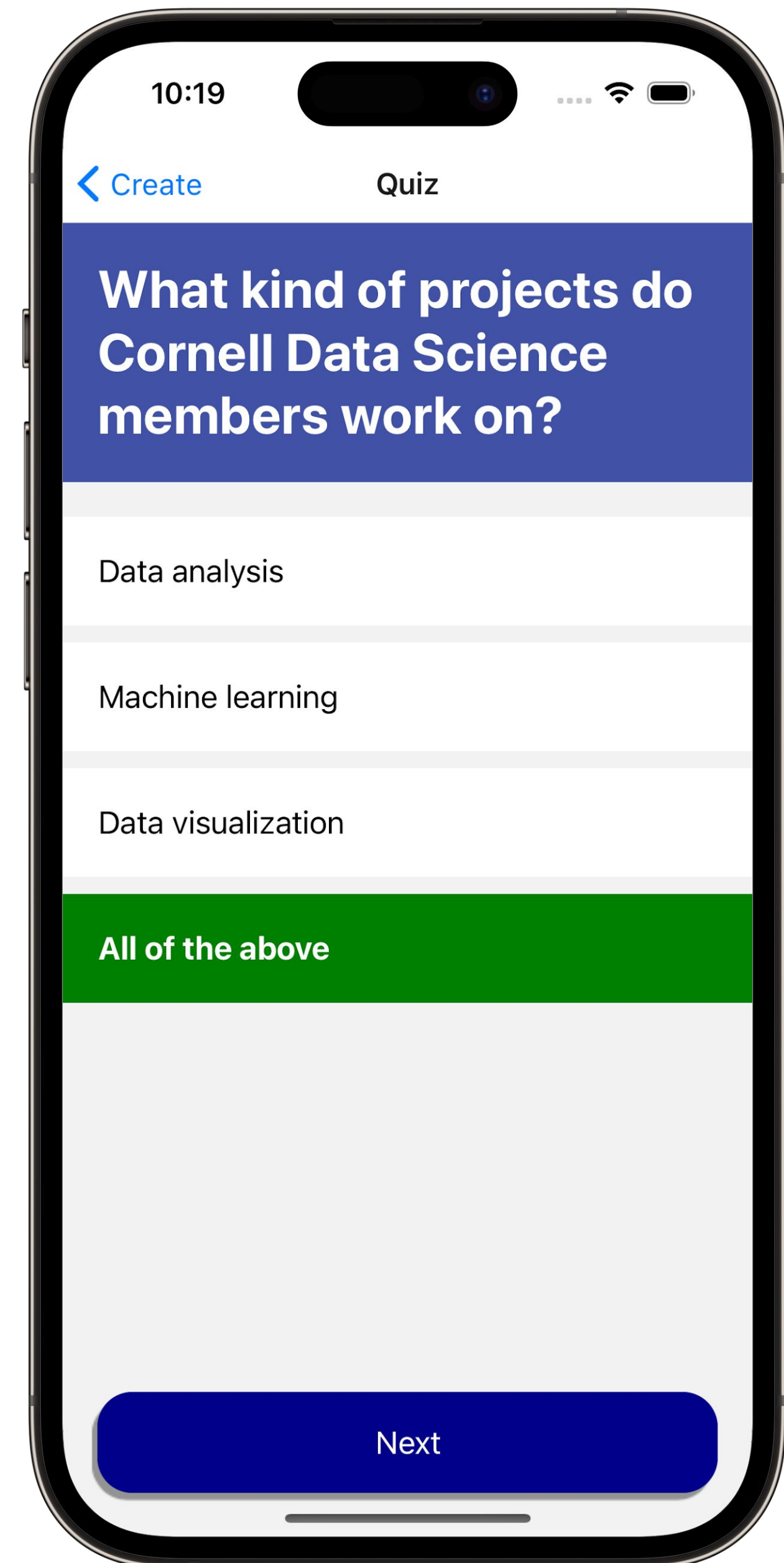
TrivAI



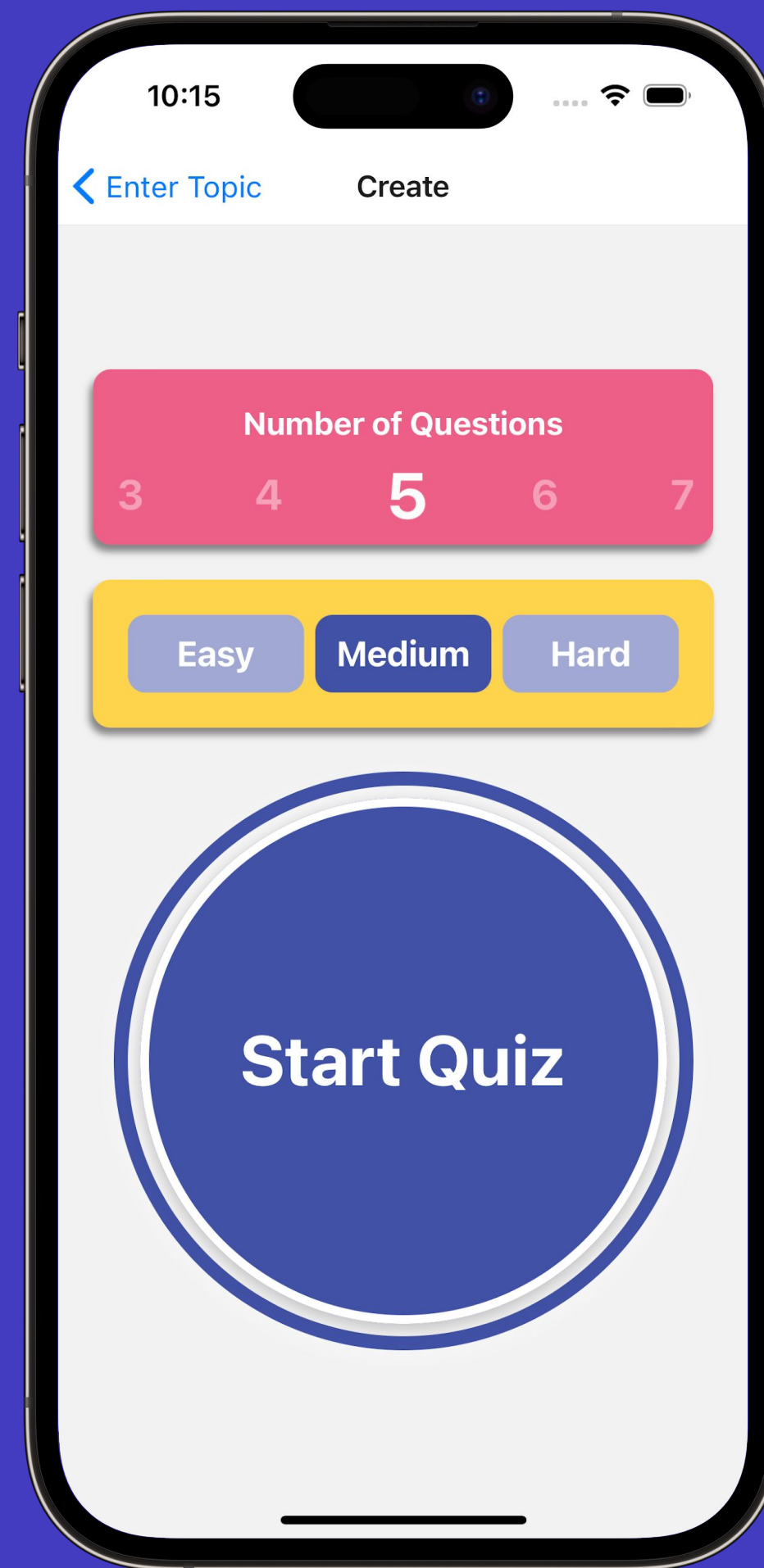
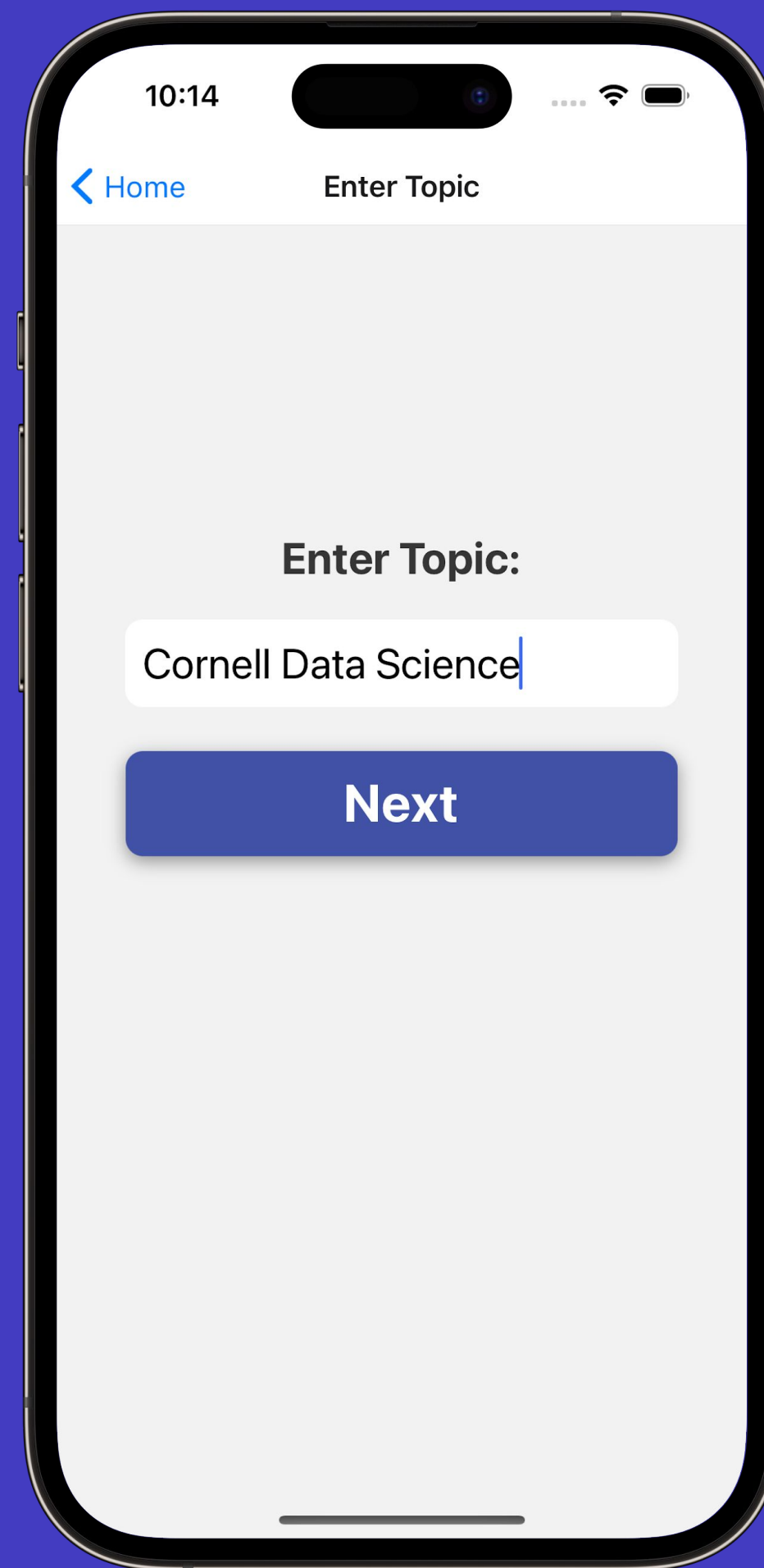
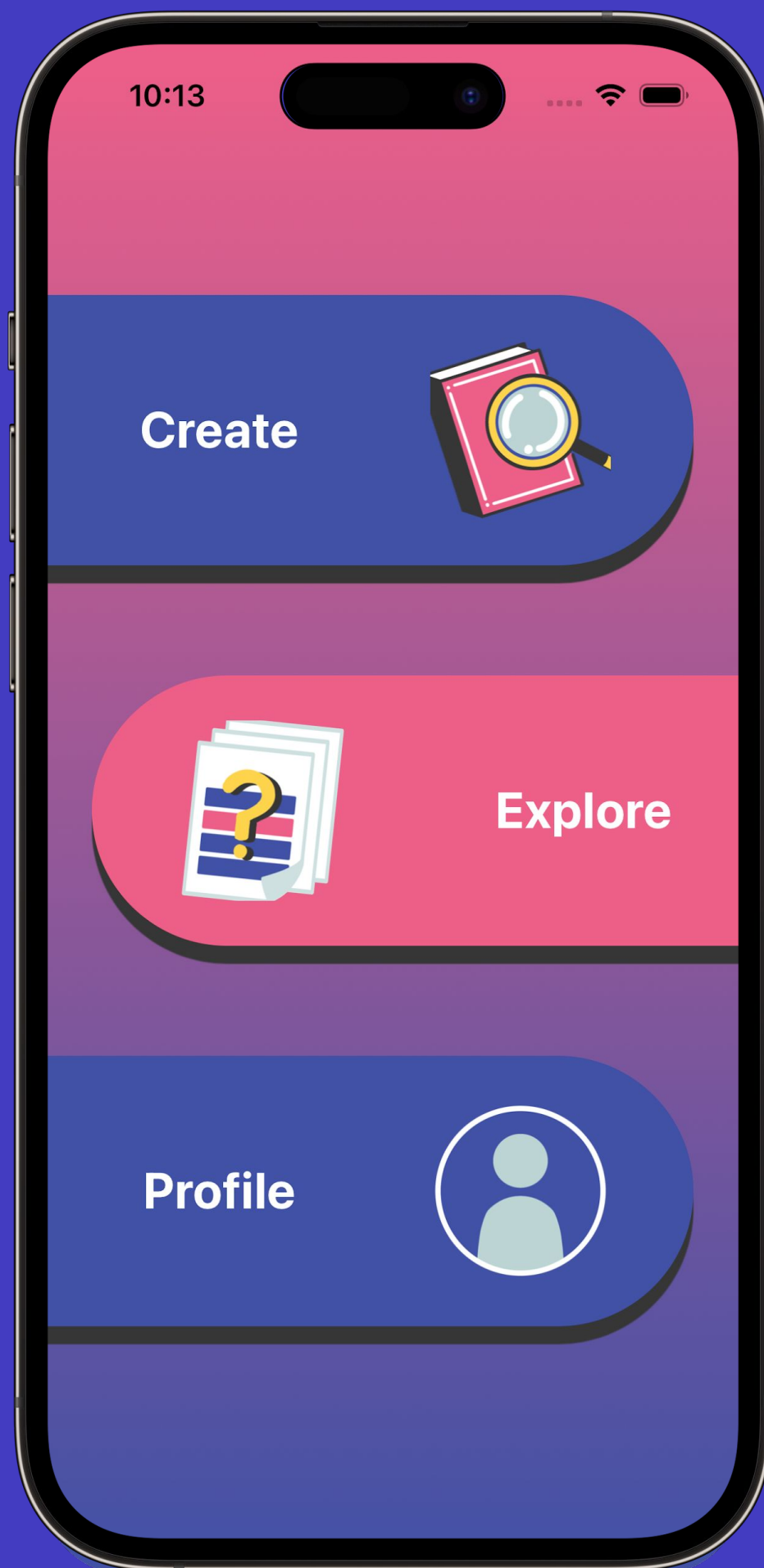
An iOS application that **generates quizzes** for users based on any topic

How does TrivAI generate questions?

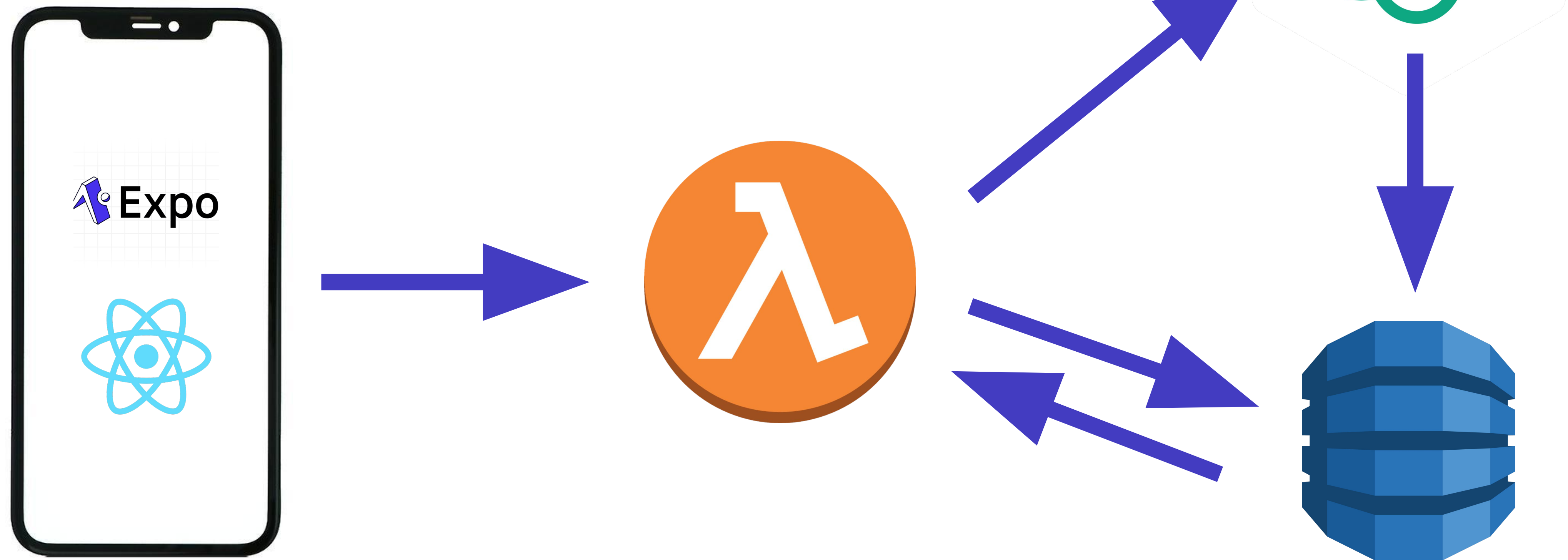
Leverages the **OpenAI GPT3.5-Turbo API** to generate questions



User Flow [FE]

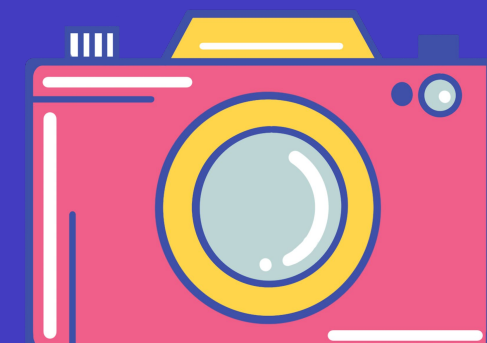
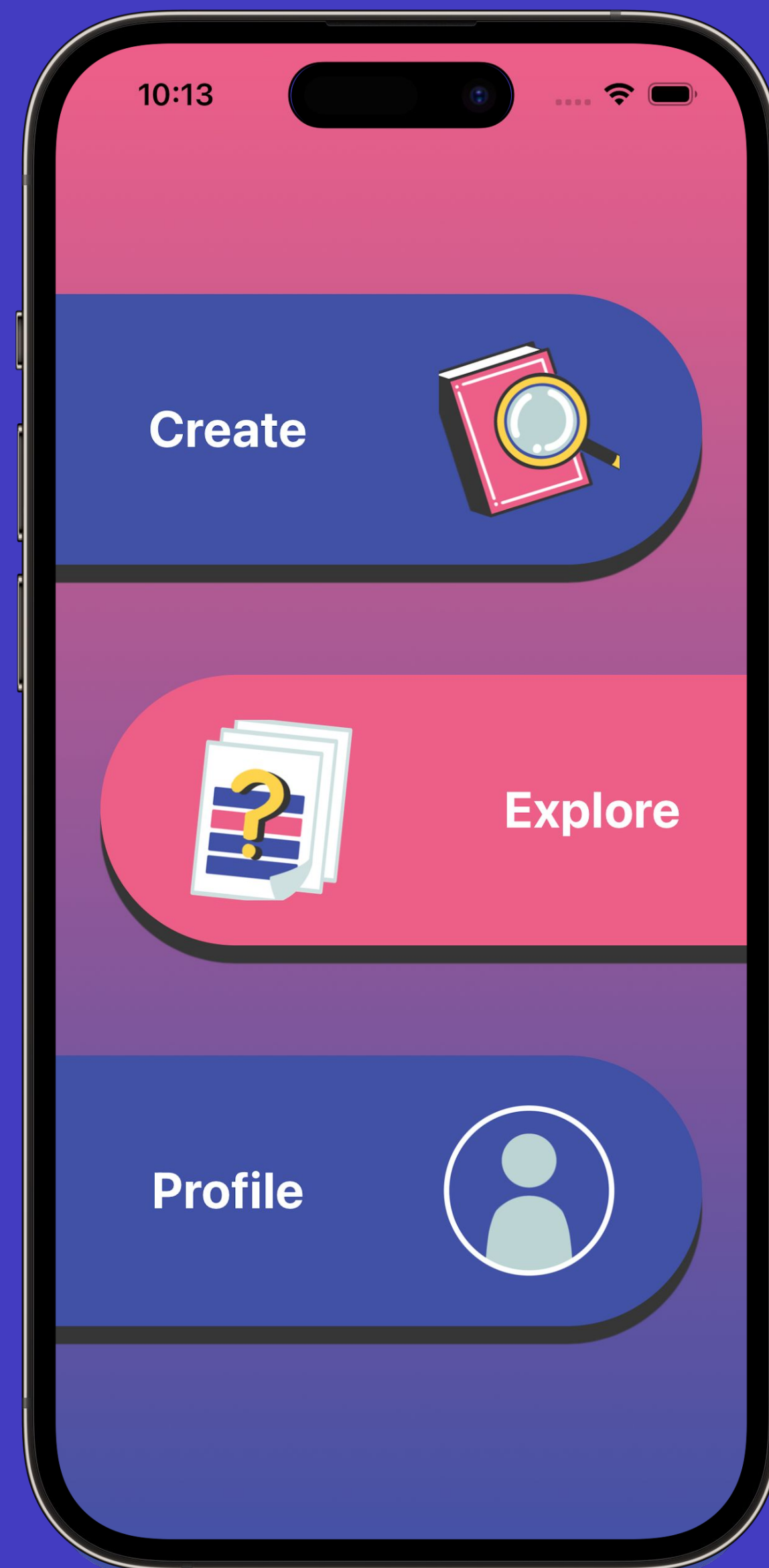


Technical Infrastructure



Frontend

The frontend of TrivAI is entirely built by the team with **hand drawn graphics**, **template-free frontend**, and **color palette**.





Supports **Android and desktop**

Real-time editing with almost little to no delays

Wide range of **designs**

Error handling



SwiftUI

Better apps. Less code.

Supports **iOS only**

Have to use **XCode** with **slow simulators**

Limited to **10 views**

Buggy implementation

Package issues

Backend v1.0



Used Questgen
and Wikipedia
API to generate
questions

Deployed as
Flask app



Problem

Low quality questions, limited topics,
slow computation

Prompt Engineering

```
# get MCQs based on a topic
def get_mcqs_topic(topic, num_questions):
    mcq_topic_prompt = """
    Create %d questions about %s in the following json format:
    [
        {
            "question": question,
            "options": [option 0, option 1, option 2, option 3],
            "answer_id": answer_id
        },
        {
            "question": question,
            "options": [option 0, option 1, option 2, option 3],
            "answer_id": answer_id
        }, ...
    ]
    """ % (num_questions, topic)
    return get_chatgpt(mcq_topic_prompt)
```

Different question types required different prompts

Trial and error – identified effective prompts

Key prompt descriptors: 4 answer choices per question, follow specified output format

Backend v2.0

AWS Lambda



- Rewrite backend using **AWS Lambda**
- Serverless deployment
- **AWS API Gateway**
- Use **Postman** to send requests for testing

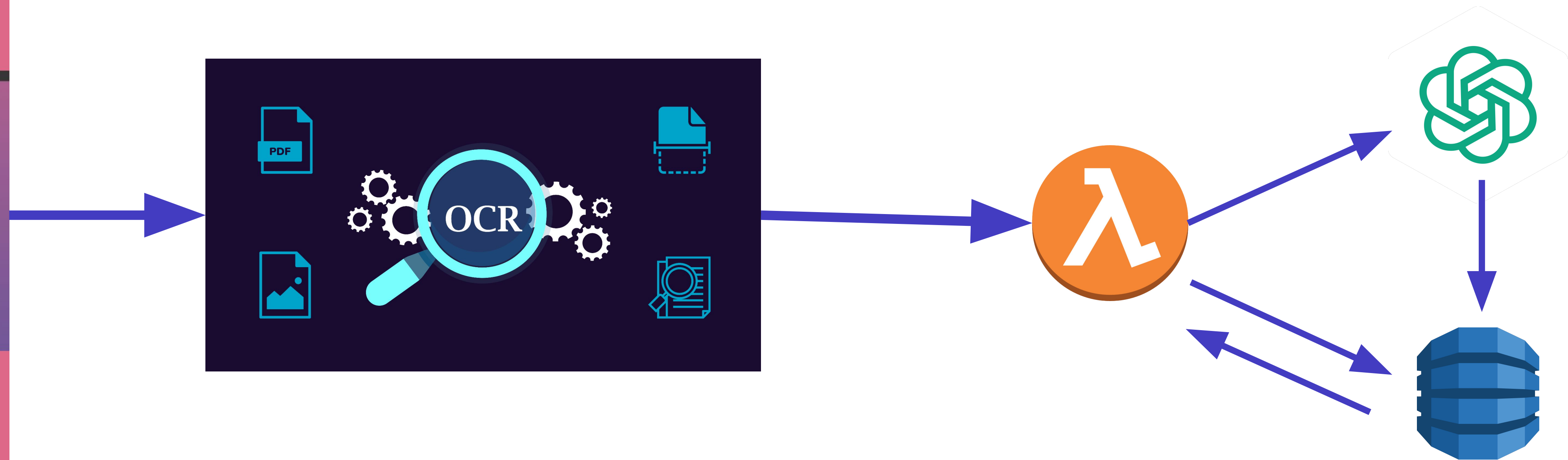
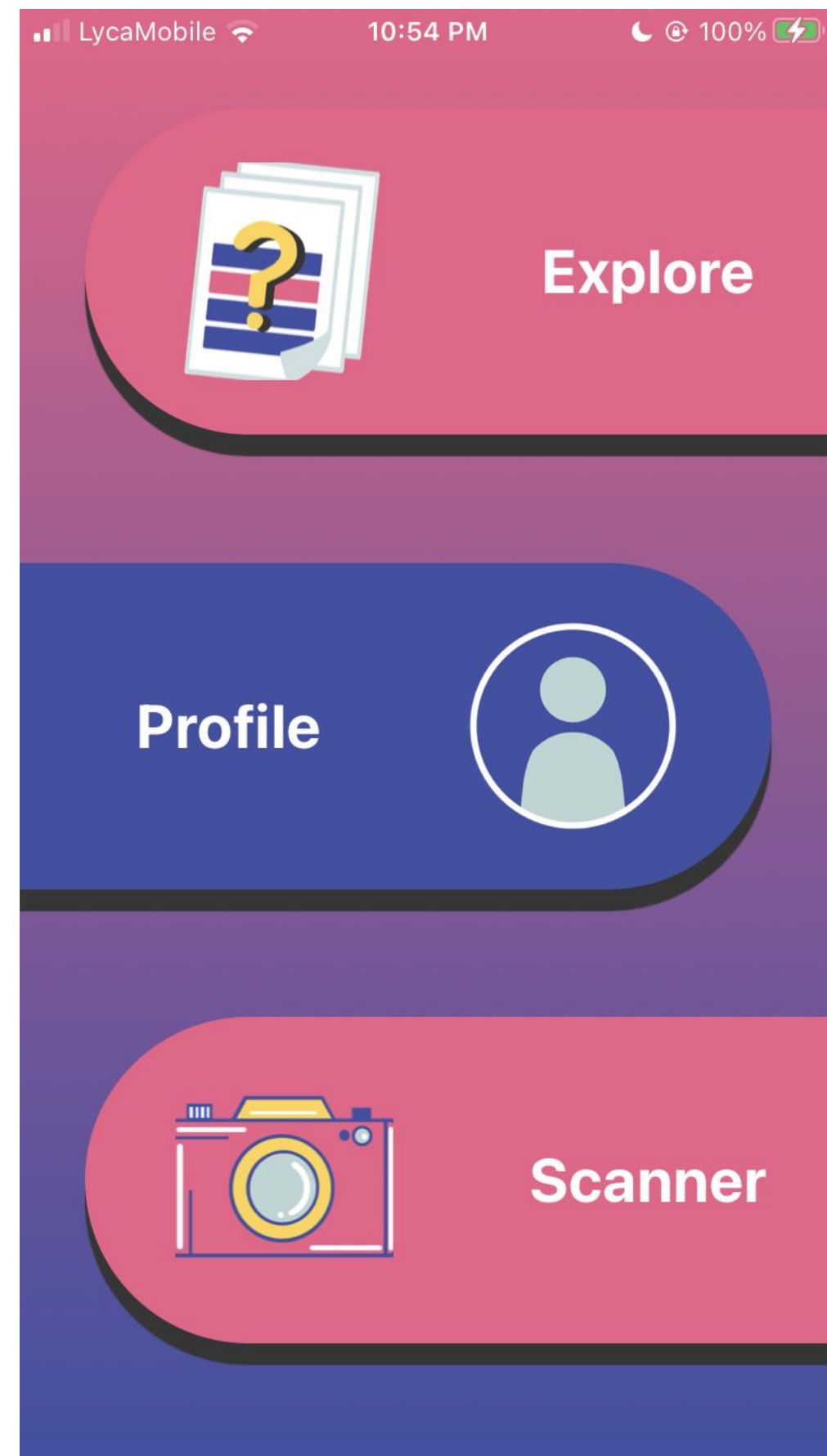
Backend v3.0

DynamoDB

- Uses DynamoDB to cache questions
- Eliminate duplicate API calls
- Good lambda function integration
- Reduce waiting time



Textbook Scanner



Future Plans

- User registration & customization
- Store and retrieve quizzes for each user
- Evict problems from database based on user feedback
- Improve CV to more accurately extract textbook passages

