PROJECT PROPOSAL

Topic Name: Third Mentored Project: Audio-based Social Media App

Team Members:

Team 1: Mobile App Development Team

Pavan Nekkanti (ln2460)

Karthik Ammanamanchi (sa3979)

Rachana Dereddy (rd2998)

Rishav Agarwal (ra3141)

Nandini Agrawal (na2928)

Team 2: ML Team

Han Wang

Ruyue Wang

Ziyuan Jiang

Zheng Hui

Description (as given in Courseworks - More Details will be added):

Social Audio Companies are popping up and growing fast in this post-Covid time. Clubhouse, launched in April 2020, now has over 10MIL users, and with a valuation of $1 BIL USD. The reason social audio is exploding is because it is an untapped medium that provides rich reward for the three human motivators of engaging with others, i.e., for meaning, communion, and agency "Toward a comprehensive taxonomy of human motives". Human speech evidently conveys an adaptive advantage, given its apparently rapid dissemination through the ancient world and global use today. "Instant messages vs. speech: hormones and why we still need to hear each other".

After reviewing this space, we do not see any company tackling the whitespace of allowing people to find and engage with other people for peer-to-peer conversations on specific topics of interest, that can lead to enriched dialog and trusted relationships over time. Due to the impact of the digital world, our time is more fragmented, where traditional social media has become "Attention Alcohol" and the need of having genuine, trusted, and meaningful conversations is a growing and unmet need.

By building an app which can allow us to ask questions as they come up in our heads, at any moment in time, using the hands free, eyeballs on screen free interface of voice, we can tap into this great and growing whitespace of human-to-human conversation.

- The voice driven interface in our smartphone to allow us to ask open ended questions of other humans, i.e., questions that a Siri, Alexa, or Google cannot answer as they require context, and the power of human voice with its ability to provide rich meaning based on the embedded audio queues
- A matching algorithm that connects questions with answer candidates in ways to optimize the fulfilment of the request with speed and accuracy. The inferred profile elements can be used for the matching and enhanced over time with the power of NLP insights extracted and mapped based on the Taxonomy of Human Motivators.
- The gamification construct of the app where there will be stickiness provided to ensure recency, frequency, and level of engagement, will be provided by incentivizing users with limits on how many questions or answers they can provide before reciprocating the effort, i.e., after so many questions, we must provide so many answers and vice versa.

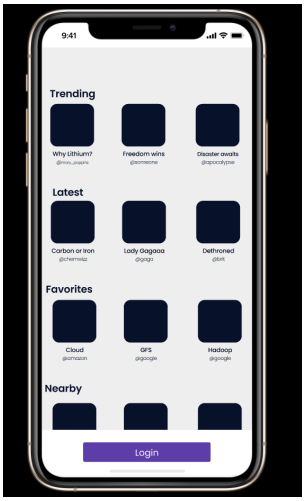
PROJECT PROTOTYPE

Link:

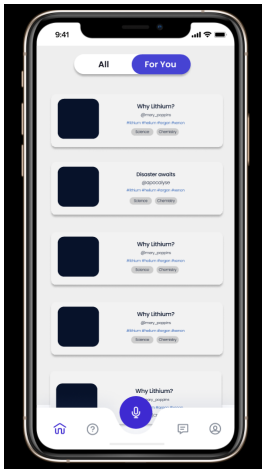
https://www.figma.com/file/D50YuLOog6SjWdjSCKPaOI/ccbd-social-audio-app?node-id=0%3A1

API

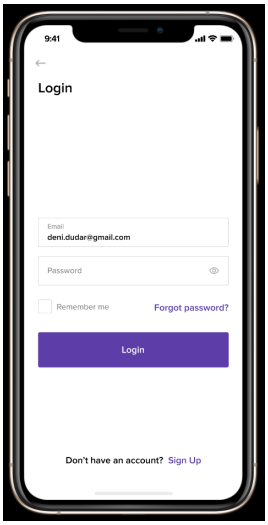
1. GET /relevantquestionsforhomepage?userId={userId}
   Headers = inAppContext
   Response = HomePageQuestionResponse



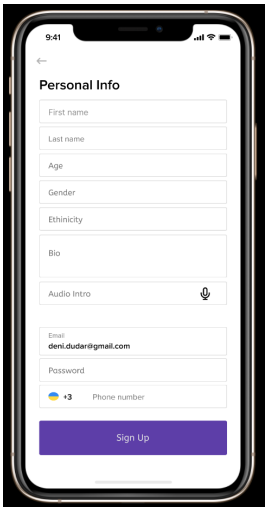
2. Get ForYouQuestionsResponse GetRelevantQuestionsForUser(userId, inAppContext)



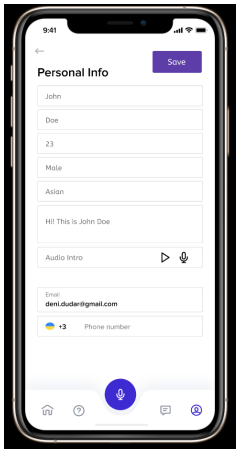
3. Get LoginResponse loginUser(email, password)



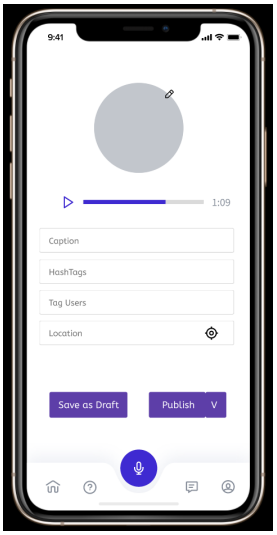
4. POST /signup
   Content: ProfileInformation
   Response: LoginResponse
   Headers: inAppContext



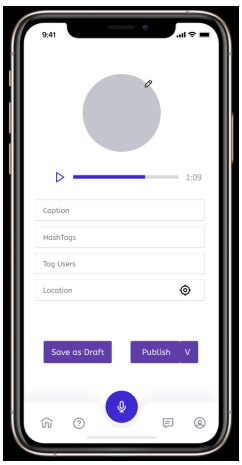
5. POST ProfileEditResponse EditProfile(ProfileInformation)



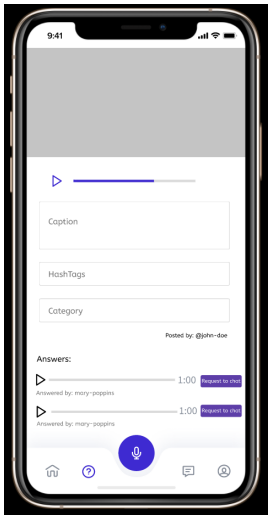
6. POST ApiResponse saveQuestion(Question)



7. POST ApiResponse EditQuestion(Question)



8. GET Question getQuestion(questionId)
9. POST ApiResponse answerQuestion(Answer)



10. List<Question> GetMyQuestions(userId, questionStatus)

11. Get List<Discussion> GetMyDiscussions(userId, discussionStatus)

12. POST ApiResponse SetQuestionAsFavorite(userId, question)

Internal

13. Post ApiResponse SendNotification(ToUser, FromUser, Question)

Content: SendNotificationRequest {toUser, FromUser, Question}

JSON

Error

```
{
 message: string,
 errorCode: string,
 trace: string,
 correlationId: string,
 additionalDetails: Dictionary
}
```

ApiResponse

```
{
 success: boolean,
 error: Error
}
```

HomePageQuestionResponse

```
[
 {
  homePageCategory: HomePageCategory,
  questions: Question[]
 }
]
```

ForYouQuestionResponse == Question[]

HomePageCategory

```
{
 Trending,
 Latest,
 Favorites
}
```

Question

```
{
 questionId: string
 caption: string
 postedBy: string
 hashtags: string[]
 categories: AudioCategories[]
 taggedUsers: User[]
 audio: bytestream
 Thumbnail: bytestream
 location: string
 isPublished: boolean,
 questionStatus: QuestionStatus
}
```

Answer

```
{
answerId: string
```

question: Question
audio: bytestream
answeredBy: string
}

QuestionStatus
{
Draft,
Posted,
Answered
}

Discussion
{
discussionId: string
question: Question
answer: Answer
discussionStatus: DiscussionStatus
meetingInfo: MeetingInfo
}

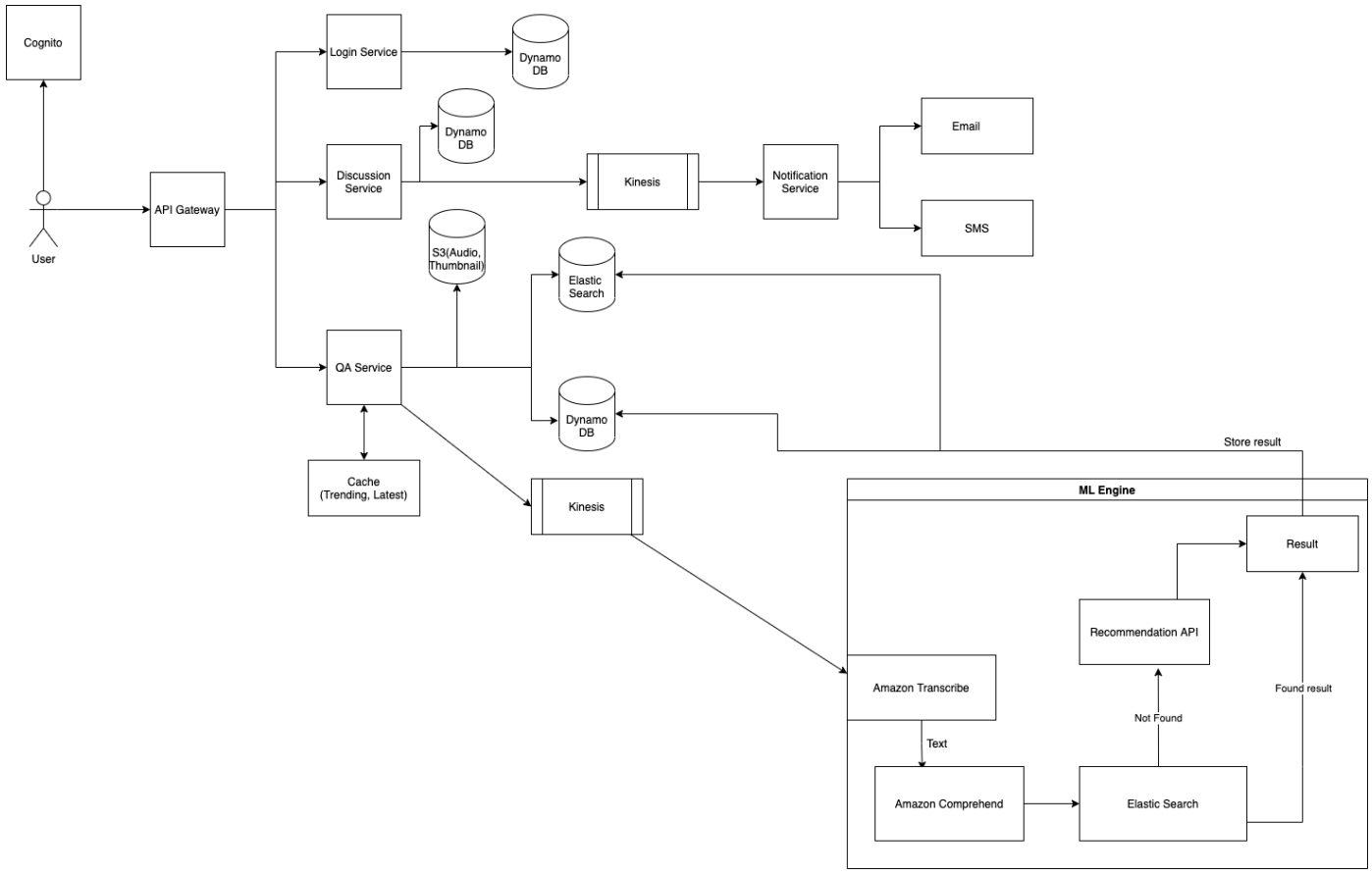
DiscussionStatus
{
Requested,
Confirmed
}

MeetingInfo
{
User1: User,
User2: User,
additionalProperties: {}
}

AudioCategories - n
{
ML Engine generated categories/Predefined for now
}

ApplicationUser
{
email: string,
password: string,
firstName: string,
lastName: string,
preferences: AudioCategories[],
age: number,
sex: string,
ethnicity: string,
audioProfile: bytestream,
intro: string,
phoneNumber: string
}

Architecture Diagram:



RDS Store:

Pswd : sunrisesinthewest

ML Team

1. getTrendingQuestions(): List<Questions> **-> computed by the ml team by also considering some other inputs.**
2. getQuestionsForMe(userid): List<Questions>
3. getQuestionForSearchQuery(searchQuery): List<QuestionAnswers>

Queue Contract when a new question has been created on the frontend?

Question Id is dumped into a SQS queue ‘questions-for-processing’

Response:

```
{Messages: {
        ['MessageAttributes' : {
        ‘QuestionId’:{
        ‘StringValue’: value
        }
        }]}
}
```

What are the initial steps in badminton?

Data Audio -> Transcribe -> Generate Metadata -> **Question == Answer**

(How to play badminton == step 1: step2:)

User asks a question -> ML engine gets the answer and provides it.

Minimum Viable Products:

Date: 12/04/2021

Mobile App Development Team Youtube Link:

https://youtu.be/H7LNiP6lel4

ML Team YouTube Link:

https://www.youtube.com/watch?v=h1Ysq8wVGIg

App Team Presentation:

https://docs.google.com/presentation/d/130eFMCg-yxiWVf4TZuOq6S8IcYrwH41nEmMUrJXw-Zg/edit?usp=sharing

App Team Final Demo:

https://youtu.be/YavDVPdB2eo