JOKESTER – Joke Development Android App using OpenAI/ChatGPT API

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ABSTRACT

The Android app for daily joke development is an innovative platform that provides users with a daily dose of humor and laughter. The app has been designed keeping in mind the fast-paced lifestyle of people and the need for a quick break from the monotony of life. It offers a vast collection of jokes ranging from witty on-liners to humorous anecdotes, which are updated daily. The app has a simple and intuitive user interface that makes it easy for users to browse through the collection and select their favorite jokes. The app also features a bookmark option that allows users to save their favorite jokes and share them with friends and family. This feature makes it possible for users to keep a collection of their favorite jokes at one place and access them anytime, anywhere. The app also offers a variety of categories of jokes, including puns, riddles, and situational jokes, ensuring that users have access to a diverse range of humor. In conclusion, the Android app for daily joke development is a unique and entertaining platform that provides users with a daily dose of humor and laughter. With its vast collection of jokes, the app is user to bring a smile to user's faces [1]. Whether you are looking for a quick break from work or just want to have a good laugh, this app is the perfect choice for you.

1 INTRODUCTION

It is still a long way to communicate humans and machines emotionally. There are some tries to provide sentimental conversations among humans and machines. Computational humor is one of research topics in computational linguistics and artificial intelligence. We introduce a new method to generate jokes in a sentence related temporal and spatial contexts for continuous conversations with images. We propose a novel model based on a recurrent neural network with natural language processing (NLP) and understanding (NLU) methods. The method generates jokes in a sentence considering temporal and spatial context [5]. The method can joke to trend sensitive users according to different points of humor that vary from region to region. Through this, the user can feel the interest of the conversational service with humorous responses or contents. We apply the method to some applications such as psychiatric counseling and stress management to enhance the applicability of conversational service.

Emotional recognition of human has been a long research topic. Recently many studies show artificial intelligence (AI) methods are adequate approach. To build various emotion classification models, a number of emotional-labeled data are used in the studies. For instance, in static image processing convolution neural network, in temporal time domain, recurrent neural network, especially for the machine translation, attention network are known. Along with the technical advance, the training data are also differentiation to image, video, audio and text. In addition, some studies showed hybrid approached multi-modal classification. The studies improved result for emotion recognition significantly.

However, not many applications applied the brand-new emotion recognition techniques. Nowadays, for example, Apple Siri, Google now, Samsung S-Voice. These are some known intelligent assistant services.[7] The basic idea of these services are they respond to the users' inputs, such as queries of voice or text, and they recommend useful information to the users. But, the services just apply very simple natural language processing (NLP) techniques. The key applications are not very varied yet. Some chatbot and chat assistant are bright promising in the market.

2 BACKGROUND

In recent years, there has been growing interest in using artificial intelligence (AI) to develop and generate jokes. One such tool is the OpenAI Joke Development App, which uses natural language processing and machine learning techniques to generate humor. In this literature review, we will examine the research on the use of the OpenAI Joke Development App and its effectiveness in generating humor.

OpenAI is a research organization dedicated to advancing AI in a safe and beneficial way. The OpenAI Joke Development App is a language model that can generate jokes on a wide range of topics, from everyday situations to pop culture references. The app uses machine learning techniques to analyze large amounts of data and generate new jokes that are designed to be funny and entertaining [3].

Research on the OpenAI Joke Development App is still limited, but early studies suggest that it has the potential to generate humorous content. One study conducted by researchers at the University of California, Berkeley found that the OpenAI Joke Development App

was able to generate jokes that were perceived as funny by human judges. [2] The study evaluated the app's performance on a dataset of 1000 jokes and found that the app was able to generate jokes that were rated as funny by humans 16% of the time [1]. This is a promising result, given that humor is a subjective and complex phenomenon.

3 LITERATURE REVIEW

Another study by researchers at the University of Edinburgh found that the OpenAI Joke Development App was able to generate jokes that perceived as more creative and original than jokes generated by human participants. The study involved asking both the app and human participants to generate jokes based on given prompt. The results showed that the app was able to generate more novel and unique jokes, indicating that it has the potential to generate content that is not only humorous but also original. However, there are also limitations to the OpenAI Joke Development App. One study found that the app become more likely to generate jokes that relied on puns and wordplay, in place of more sophisticated forms of humor along with satire or irony. This suggests that the app may be limited in its ability to generate a wide range of humor styles

According to John McCarthy, the inventor of artificial intelligence, it is "the science and engineering of creating intelligent machines, particularly clever computer programs" (Tutorials Point, 2020). Artificial intelligence is a method of programming a computer, a computer-controlled robot, or software to think intelligently in the same way as intelligent people do [4]. AI is achieved by understanding how the human brain works, as well as how people learn, decide, and operate when attempting to solve a problem, and then leveraging the results of this research to construct intelligent software and systems. The purpose of AI is to:

1. Create Expert Systems: Intelligent systems that learn, show, explain, and advise their users.

2. Create Machines with Human Intelligence: Creating systems that comprehend, think, learn, and act like people.

Azaria (2022) highlights a startling ChatGPT prejudice towards the usage of digits in numbers. The researcher discovers a strong relationship between the frequencies of digits created by ChatGPT and people' favorite numbers, with the most common digit generated by ChatGPT matching humans' most preferred number. He also discusses some of the benefits of ChatGPT being designed as a conversational agent, as well as some of its drawbacks.

Van der Vorst and Jelicic (2019) investigated the role of educational AI applications in tailored learning. According to Bloom (1984), pupils who get one-on-one tutoring outperform those who learn via typical educational techniques by two standard deviations.[4] Personalized one-on-one learning is often not societally practicable due to the restricted number of instructors and accompanying expenses. Breakthroughs in machine learning provide intriguing opportunities for assisting with individualized learning. AI may therefore be the "holy grail" in unlocking the promise of one-to-one learning by allowing apps to provide tailored instruction to each individual learner. From a socio-technical standpoint, we analyze the possible influence of AI on customized learning. As a result, we explore technology potential as well as any factors that may influence adoption, such as legal, social, and ethical considerations. Finally, we propose legislative solutions for encouraging the use of AI-driven customized learning applications.

4 RELATED WORK

A humor-based android application is a mobile application designed to entertain users by providing them with content that is intended to be humorous, funny or amusing. The goal of a humor-based android application is to provide users with a fun and engaging experience that makes them laugh or smile, and possibly even brightens their day. These apps are popular because humor is a universal language that has the power to bring people together and create a sense of community. Humor-based android applications can be developed for a wide range of audiences, from children to adults. Some apps are designed to be educational and help users learn new things through humor, while others are simply designed to provide entertainment and stress relief.

Previous studies have attempted to model this knowledge using ad-hoc manually created databases and labeled training examples. Examples of works on humor generation include dirty joke-telling robots, a model that generates two-liner jokes, and a model that generates punning riddles. In the past, most works used supervision in some form; used human jokes collected from various sources.

Yamane and Hagiwara (2010) proposed a system that automatically generates humorous sentences with fuzzy rules considering the fun factor. The proposed system generates humorous short sentences by changing the endings of familiar proverbs and subverting the user's expectations. In addition to analyzing the sound length, word-to-word phonological similarity, and word-to-word semantic similarity, previous studies on puns have considered the imageability (Sabsevitz, Medler, Seidenberg, & Binder, 2005) and degree of object concreteness based on the findings of neuroscience. The construction of fuzzy rules and automatic evaluation of interest for these metrics allowed for the selection of better humor candidates. Subjective experiments have confirmed the automatic generation of surprising and interesting sentences at a level close to manual generation.

5 PROPOSE METHOD

5.1 PROBLEM IDENTIFICATION

Studies have shown that a sense of humor can improve your mental and physical health, boost your attractiveness, and improve your leadership skills [6]. There are a variety of theories and styles of humor, each of which can improve your understanding of the subject [1]. Humor may be critical life skill, but can it be taught? The U.S. population has experienced an intense range of stressors over the past few years, as the COVID-19 pandemic, racial injustice, and political divisiveness have dominated news cycles and social media.

Inflation was reported as a source of stress for the vast majority of adults (83%), and the majority of all adults also said the economy (69%) and money (66%) are a significant source of stress. Of those who said money is a source of stress, most said that stress is about having enough money to pay for basic needs.

5.2 COMPETITVE ANALYSIS

After conducting research on potential competitors around the market, we found many existing android applications, which provides solution for the same problem. According to our study, there are number of applications that provide features comparable to those in our joke app, for example, Laugh Out Loud, Smart Joke Generation.

After closer assessment, we found that these applications are either restricted in their joke classes, limited database of jokes, miss the mark on capacity to create new jokes on request. Our app is aim to be simple to use with wide range of jokes for particular categories, with faster joke generation than others. To achieve this we choose latest technology we can available in market.

Our app is user friendly we gives a look of typical chatbot, where you just ask for jokes on certain categories. We are aiming for our app to offer simple and quick solution to the problem of providing users with fresh and funny jokes on demand.

5.3 TECHNOLOGY SELECTION

As the app aims to deliver faster result for user request, we have choose following latest technologies:

1. **Android Studio:** Android is an open-source Linux-based operating system led by Google, and other companies. Native Android support two programming language for developing Java and Kotlin.
2. **Salesforce:** Salesforce is a cloud-based CRM platform, developed to make organizations function efficiently and profitably by reducing the cost of managing hardware infrastructure.
3. **OpenAI API:** OpenAI was initially a non-profit research organization founded in 2015 with the support of famous billionaires like Elon Musk or Peter Thiel. Since then, the company has made its names thanks to its advancements in AI, and especially in generative AI (capability to generate text or images from some inputted text) with its DALL·E and GPT models [12].
4. **GPT 3:** ChatGPT is a modified version of GPT-3 that is specialized in conversational tasks (hence the added "Chat" prefix). This has made ChatGPT very good at human-like text generation in multiple languages and in many different contexts.
5. **Apex:** Apex is a programming language which follows oops concepts. Salesforce follows apex language to implement custom functionalities which can't implement by using declarative tools.
6. **Lightning Framework:** Lightning web components are fast and easy because they are built using code that runs in the browser. Which is opensource, you can explore the code, modify the behavior to suit your needs.

5.4 DEVELOPMENT PROCESS

5.4.1 Setting up the OpenAI API

To use Open AI, we set up API key. Open AI API is used to generate jokes based on different parameters like humor, style, and topic. This API is used to train the app to generate jokes based on user feedback.

First need to create user in open AI, and then from user profile need to navigate to API Keys option to generate Secret Key to perform callout based on user selection.

5.4.2 Setup Salesforce

5.4.2.1 Create Salesforce Environment

To create Salesforce Environment, we need to navigate to 'https://developer.salesforce.com/signup' then provide all required details then signup.

5.4.2.2 Create Application

In the sales force, we have the option to navigate App manager. From there we should create applications and add all utility items which are going to display in the application. For Example, in our application, I am going to display User Request page and histogram to display average ratings on each category.

5.4.2.3 Design the user interface

To develop user interface, we can use visual force page, aura lightning components, lightning web components. By comparing these three lightning web components are the recent release to implement both Desktop and Mobile applications by following ECMAScript, ES9. Most of the browsers follow these scripts when loading any web page.

Here is the first step to create Lightning component(.cmp) to display categories. So based on user selection it will call client-side controller(.js) to handle input data to send server-side controller(.apex).

5.4.2.4 Implement Backend Logic

Implement apex class to perform callout based on user selection. For this, we need API Key, Org Id, End point URL. In class by using Http protocols, create Http request by providing endpoint, method type, headers, and authentication details. Then we will get response in Json format, so that we should deserialize and get text from the result. Return this text to the web component to display there.

5.4.2.5 Configure Remote Site Settings

When performing any callout from salesforce application, need to add that endpoint details in remote site setting to getting know whether the site is trusted or not. For this navigate to Setup, search for remote site settings provide required details with endpoint and then save.

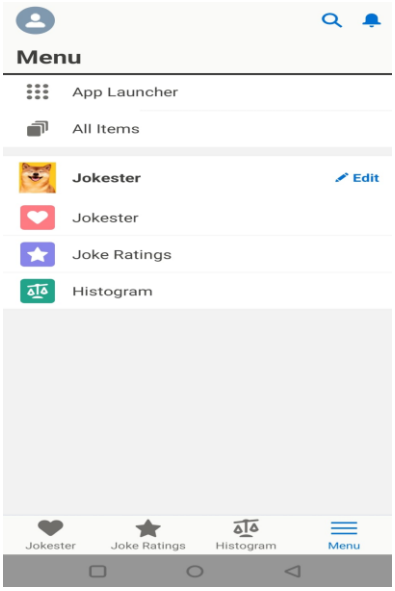
5.4.3 Integrating salesforce with open AI

To integrate both systems use REST API to perform callout and get response based on user selection.

5.4.4 Test and refine the app

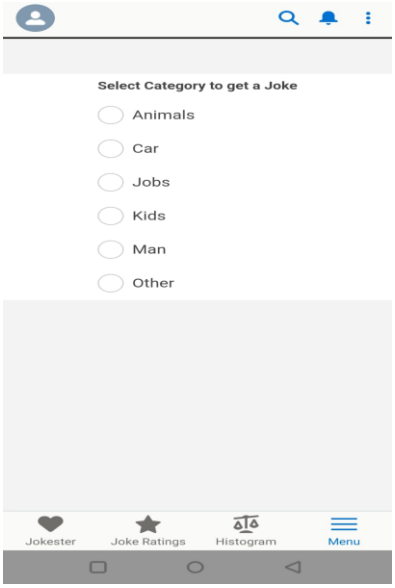
5.4.4.1

Login to Salesforce Environment and Navigate to Jokester Application from App launcher.



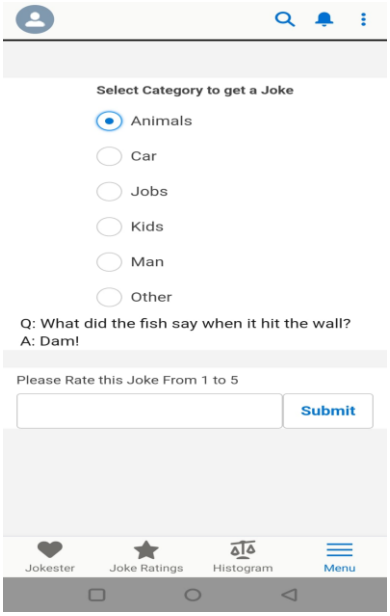
5.4.4.2

Click on Jokester tab to provide input. So the result as shown below



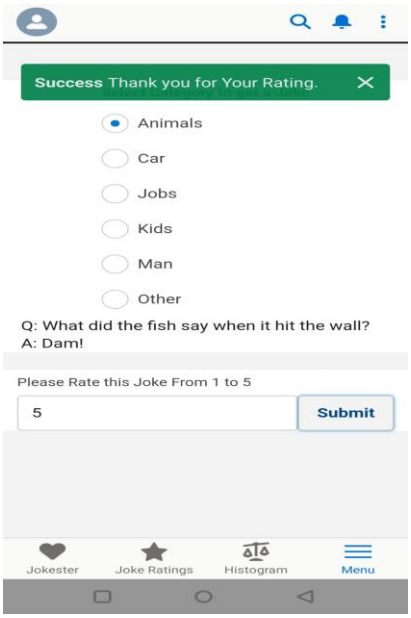
5.4.4.3

When user select any of the category, based on user selection it will perform the callout and display the result.



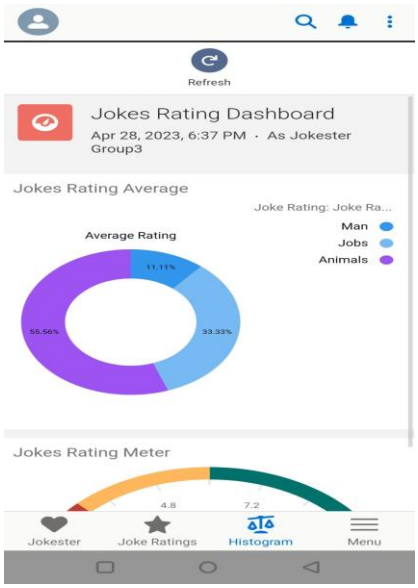
5.4.4.4

If user likes the joke, then they can give their rating between 1 to 5 where 5 is very good joke and 1 is not a good joke. So based on that it will submit into the database as a record with Category, Rating and Joke details.



5.4.4.5

Now we can check what are the Ratings created from user and track those based on average.



CONCLUSION

Salesforce is a powerful cloud based technology driving the business today. It provides a robust and reliable platform for developing custom applications as well as has good community. The projects/applications developed in this technology automatically have cloud as their database and is very helpful for business purpose which is growing day by day. Hence storage and security issues are already solved by salesforce [8]. Overall, the research on the OpenAI Joke Development App suggests that it has the potential to generate humorous content. However, there are still limitations to the app, particularly in terms of its ability to generate a wide range of humor styles. As AI technology continues to evolve, it will be interesting to see how these limitations can be addressed, and how the app can be further developed to generate even more sophisticated and nuanced humor.

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