International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 08 Issue: 09 | Sep 2021 www.irjet.net p-ISSN: 2395-0072

Predictive Modeling: People's Opinions on uses of Artificial Intelligence

Vedant Tapadia[1], Suhrud Joglekar[2]

[1]Student/Vice-Chair ACM PES MCOE Student Chapter, Pune, Maharashtra, India
[2]Student, Dept. of Mechanical Engineering, PVG's COET & GKPIM, Pune, Maharashtra, India

---

Abstract - *In today's world, most of the automation processes and other measure industries are trying to use Artificial Intelligence for their benefit and to understand their customers deeply. We know that many organizations, their websites use different forms of AI in different sectors such as AI for recommendations, AI for content creation, and many more. Our aim was to get the people's opinions about various aspects of the fields and then create an AI model with the help of the data and to determine the accuracy with the help of testing factors associated with the data.*

Key Words: **Deep Learning, Artificial Intelligence, Classification, Recommendation, Prediction**

1. INTRODUCTION

It is undeniable that AI is the future. As we are starting to realize the potential AI holds and its different use cases it is also necessary that we as people are comfortable with these applications. Today as industries are using AI for some of the tasks, in this paper we actually try to find out if people are actually happy with its performance. Furthermore, we also try to predict with a DL model if a person would like AI being used for "making creative content" based on his/her opinions about the existing major applications of AI. Most of the industries are excited to use AI in their products or services, however, are not aware that the end-users are actually satisfied with this use of AI. Our research aims at filling this gap between what a person would be happy to see AI used for and what the industries actually use it for.

1.1 Literature Survey

There have been multiple researches on this topic of public opinion on AI but almost all of them have been in USA and on general public. The conclusions from previous research have shown that more Americans support development of AI but that should be carefully managed and strictly regulated. There have been many researches on AI for governance and transportation, and all of them have shown that younger citizens have less degree of concern about the overall use of AI. The development of AI is most trusted if done by academia or defense forces. The general public expects AI would be more useful than harmful in the next 10 years.

2. AI for Creative Content

We know that different forms of artificial intelligence are used in our world. Nowadays AI is also used for content creation. We can use AI to recommend the content according to the user's tastes. We can use it to classify the available content according to the needs and requirements. We can also use AI for predicting system behaviors under various circumstances. In this google form, we try to get the correct results by using AI regarding the predictions of the opinions.

2.1 AI for Content Creation

We asked the users regarding their opinions on AI generating creative videos or short stories/ reviews. We can also experience AI-engineered Audios that are easily audible on the Internet. Our deep learning model will predict if the user will like or dislike based on the other two questions.

2.2 AI for Content Recommendation

In this particular type, we used several questions to get the opinions of various people. We asked them if they like AI recommending videos, e.g., YouTube. We also asked them regarding stories and articles. The same question was used to get their opinion regarding Audio recommendations. An excellent example of this current use of AI is for the recommendation of the shopping item based on the current selection by amazon.com. (Ref: - customers who bought this item also bought.)

2.3 AI for Content Classification

This is mainly used in the form of automatic text classification as a method to organize and prioritize information so that any professional, as well as layman, can access the information they need. This also helps in identifying policy violations since most of the creative content has some or the other copyrights. Gmail spam classifier or the important message marking is a classic example of content classification. Spam has always been annoying for email users and these unwanted messages would cost a considerable amount of time to deal with manually. These classifiers are based on a number of rules or factors, such as the sender's address, malicious links, advertising phrases, and more. Google particularly uses its

own machine learning platform called TensorFlow. Using this simple classification helps them to block up to 100 million spam messages daily. Thus, reducing their overall server space requirements significantly over a long duration of time.

Similarly, Google Photos and Facebook also use content classification for segregating different photos. The growing consensus around content classification among 21 and 25-year-olds shows that what these large companies are doing is actually useful. According to our survey, around 83% of the respondents said that their experience with the Gmail classifier and Google photos was actually useful and that they were happy with the way their photos and emails were sorted.

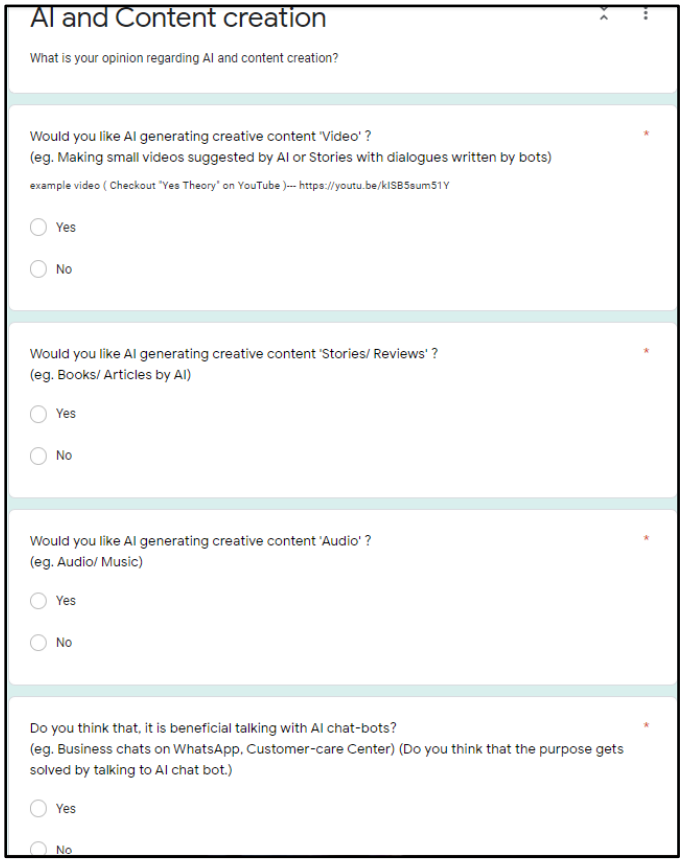

Fig -1: AI AND CONTENT CREATION

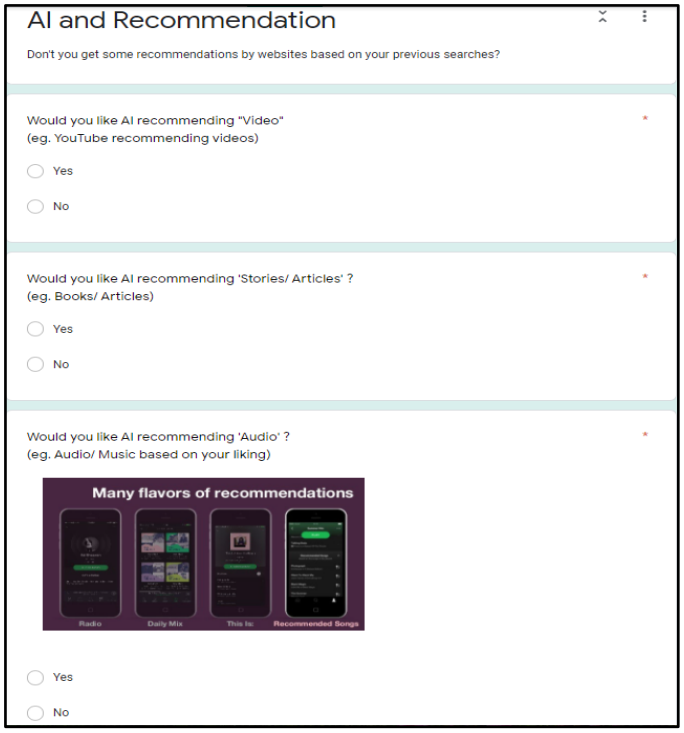

Fig -2: AI FOR RECOMMENDATION

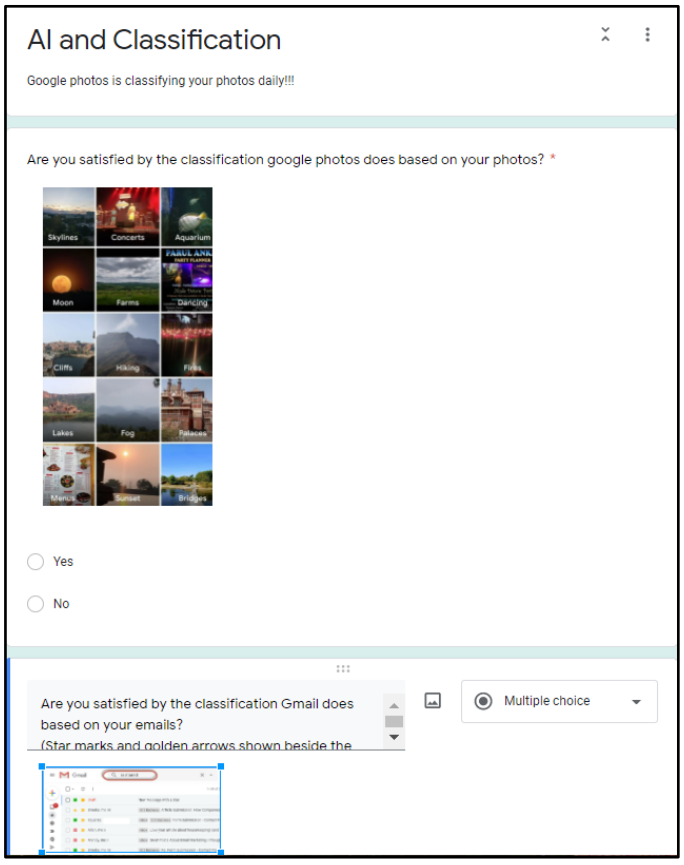

Fig -3: AI AND CLASSIFICATION

3. Deep learning model for Prediction and Results

Prediction model for opinions on AI

The use of data and statistics to predict the outcome of the data, in our case the opinion around AI, is called 'Predictive Modeling'. We have used Python 3 and Python-based frameworks for building our model. This made our model a lot faster and easier to train.

The basic steps involved in building a predictive model are

1. Loading dataset 2. Preparing dataset 3. Cleaning dataset 4. Variable selection 5. Modeling 6. Fine-Tuning and Performance Evaluation 7. Saving and deploying the model

1. Loading the dataset using pandas is a well-known step and we have followed the standard procedure.

2. Preparing the dataset means we convert the target variables - Yes, No - to 1,0 respectively.

3. Cleaning the dataset is to ensure that we have all the values filled with the correct format in every column.

4. Variable selection- The idea here is to apply a variety of techniques to select variables. When an algorithm picks a variable, we give a vote for the variable. In the end, we calculate the total votes for each variable and then pick the best ones based on votes. This way, we end up picking the best variables with minimum effort in the variable selection process.

5. Modeling- Here we split our dataset into train/test and try a variety of algorithms on the data. We found the Neural Network framework best fitting for our dataset.

6. Fine-tuning and performance evaluation- We try changing the hyperparameters to get the best performance. We measure the accuracy in terms of error rate.

7. Saving and Deployment- After we have developed the entire model the final step is to save and deploy this model in order to further find people's opinions regarding various uses of AI.

Table -1: Statistics of Responses

Statistics of Responses		
Use Cases	Majority of the responses	Actual Percentage
Content Creation	Yes	68.62
Content Recommendation	Yes	81.37
Content Classification	Yes	83.33

The actual statistical results are as follows: - 1) Actual percentage of the users agreeing to the content creation is 68.62%. 2) Actual percentage of the users agreeing to the content recommendation is 83.33%. Based on these two questions we predicted the result for the third question in which we got the agreeing population to be 81.37%

The responses show us that there is a direct relationship between the people liking AI for generating content i.e., if they like AI recommending videos and songs, they are most likely in favor of using AI for generating content.

4. CONCLUSION

In this way, we can conclude that most of the 20-25 years old people would follow a specific trait in their opinion towards AI being used generating creative content. The accuracy of our model is 91% which depicts that the concerned question in the model is directly varying with the previous questions and their answers.

REFERENCES

[1] https://towardsdatascience.com

[2] https://www.analyticsvidhya.com

[3] https://www.fast.ai/ Jeremy Howard and Sylvain Gugger, "fastai: A Layered API for Deep Learning"