

INTRODUCTION

Mental health issues are the most common issue facing in human society. These issues are mostly in impact negatively on working peoples, on the individual, his/her family, workplace, community, and the economy. Our project is based on mental health chat bot of natural language processing with deep learning models. We have a structure data set of Mental Health. In the data set we have nine columns. We use neural networks to create our models. We use another method call scratch in which we create a model by our self and use it so our project we create a layer with the help of scratch. There is a 3 script of code first on is for chat bot second one is for deep learning models with neural networks and third one is from scratch.

Motivation

Motivation to Improve Mental Wellbeing via Community Physical Activity Initiatives and the Associated Impacts

Methodology

We have two scripts of code that take two different ways for us to work on the data setting this project first script of the code we load all the libraries of the data set we need in full code. After this we load the data set. Know we select the feature and target column of our data set so we select comments type column for feature and for labels we select the column which contains values like classes. know we extract the comments related column and classes for label and store the values in new data frame. We extract questionTitle, questionText, labels fork previous data frame. we create more then one data frame so our values are not clash. know we calculate the values of the labels column. Create another data frame in which we store labels according to questions. we use different python libraries to perform our task so we first we create the environment. We use jupyter Notebook for this. after we set data set and script in one directory

Dataset

QuestionID: A unique values in the data set who can help us to identify the questions.

QuestionTitle: In the data set every questions title

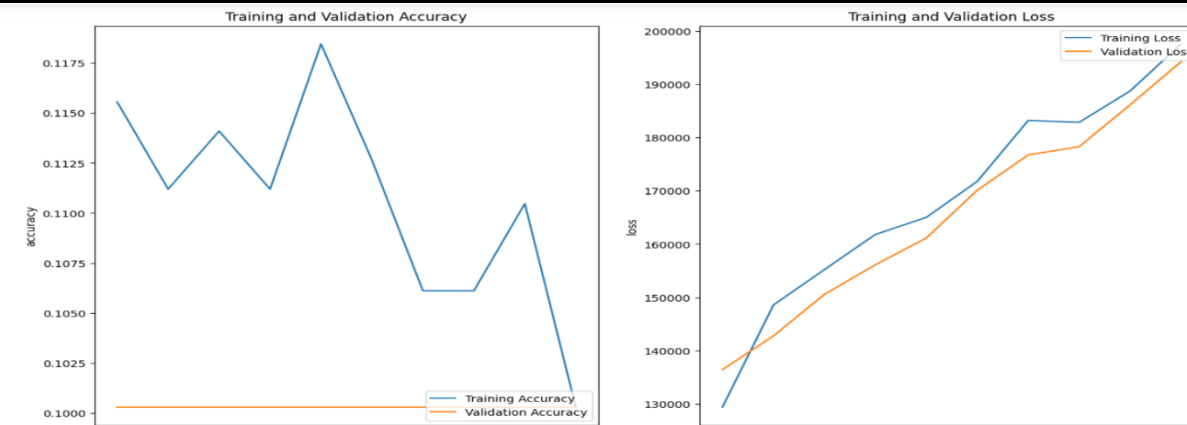
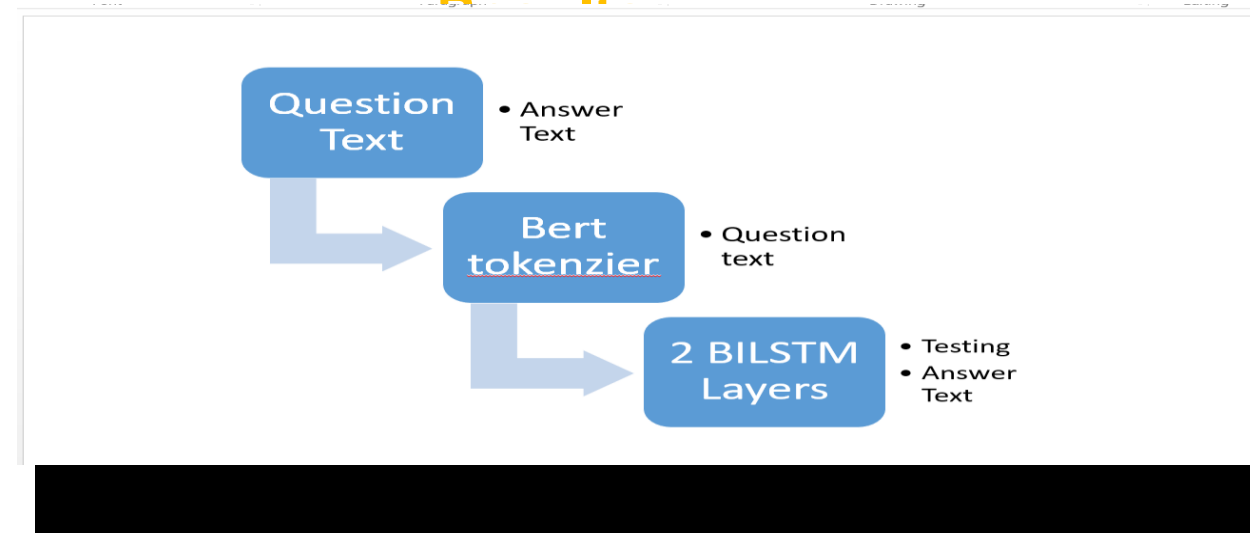
QuestionText: The Every question have there own text

QuestionLink: The last location where we get these questions (may be active or not)..

AnswerText: Therapist response to the questions.

There are 307 values of therapist on the data set, mostly therapist belong to the West coast of the US.

The data in CSV file is presented by 10 columns.



After this we create a function for chatbot, that function answer user questions. So we create a class that consist function that helps to chat bots to reply user by it self. Know we update a vocab of nltk with owner data vocab values.

Layer (type)	Output Shape	Param #
embedding_1 (Embedding)	(None, 128, 128)	3906816
simple_rnn (SimpleRNN)	(None, 64)	12352
dense_1 (Dense)	(None, 16)	1040

=====
 Total params: 3,920,208
 Trainable params: 3,920,208
 Non-trainable params: 0

Metrics	
loss	156247.71875
accuracy	0.125
f1_score	1.999409
recall	0.0
precision	0.0

So in the GRU model the Prediction values in form of matrix because the data is passed in the form of matrix. These Matrix tell us the values of the prediction according to the unseen data set. So the diagram help us to understand the model prediction form.

[5]:

	questionTitle	questionText	answerText	topics
0	Escalating disagreements between mother and wife	My wife and mother are having tense disagree...	<p>What you are describing is something psycho...	Family Conflict
1	I'm addicted to smoking. How can I stop?	I'm planning to have baby, so I have to quit s...	<p>Hi. Good for you in planning ahead to do wh...	Substance Abuse, Addiction
2	Keeping secrets from my family	I have secrets in my mind, and I don't know wh...	<p>It sounds like keeping the secrets has beco...	Family Conflict
3	The Underlying Causes of Being Possessive	I am extremely possessive in my relationships ...	<p>Hi there. It's great you are able to realiz...	Behavioral Change, Social Relationships
4	Can I control anxiety without medication?	I had a head injury a few years ago and my min...	<p>You didn't say what or how many medications...	Anxiety

Above diagram shows how the question text, question id, answer text and topics shows for the dataset description.

Conclusions

1. The goals of this project can be broken down: One Need to get better accuracy we need to go for better approach. Through this data analysis and visualization, we were able to spot the trend and find a solution to the issue at hand.

Future work

Our project tries to figure out how the mental health chat responds to the particular question. As part of our future work, we plan to make a better approach.

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