iNeuron

Project logo

Project title :- Consumer Complaints Analysis

Name of Department :- Finance Department

Technologies :- Deep learning

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1. Abstract and Objective

➢ Abstract :-

A lack of complaints or a small number of complaints against a product, issue, or firm in the database does not necessarily imply that there is little or no consumer harm. Consumers may be harmed in ways that do not cause them to file a complaint with the Bureau or to blame the product or provider for the harm they have suffered, depending on the nature of the financial product and how consumers use it.

➢ Objective :-

If only you could visualize the intermediate representation applied across different Convolutional layers in CNN to understand how the model learns. Understanding the working of the model will help to know the reason for incorrect prediction that will lead to better fine tuning of the model.
I want to here take a less number of filter model and dense model layers both so that my prediction an accuracy will be more and as well as when execute the model fit that will be take running less time.

Introduction

Customer behavior and complaints is an important issue that needs to be addressed and resolved in both public and private sectors of service providers. Customer complaints can be used as an accurate measure of how successful a service is, especially with the transformation of information technology into concepts and ideas.

Consumer Complaints Analysis is very large data In which rows 2785755 and columns 18. first need to do import some libraries then I would have to load a data. After getting an information from these data which is need to prediction. Then explore the data.

Prepare data and Build model

- **Prepare data :-**

I have take some columns data with respect to Product data which is columns name data Consumer disputed? And Timely response? Are there .then I have decided to using loc method which is arrange the certain row index columns data. Why this method was needed? Because this data is very large so that's why I'm decided. As well as lot of method have been used for prepare the data.

- **Build model :-**

Build a model x and y for train and test. x for creating Product data and y for creating Consumer disputed? Data. Now your x and y model have been ready. Then model selection which is splitting data for training and testing or you can say also in this x and y data are preprocessing.

Using CNN algorithm in deep learning

When you used a CNN algorithm so first you have to do import some model like a Sequential, Dense,Activation,Conv2D,MaxPooling2D,Flatten and Dropout. Then you have to build model with layers. In this your prediction accuracy depend on model layers. It mean difference models of each layers are variables after that model compile executed (optimizer='adam',loss='categorical_crossentropy',metrics='accuracy') and model fit executed (x_train,y_train,batch_size=100,validation_data=(x_test,y_test),epochs=5)

- **Notes :-**

I have taken a less number in difference models of each layers like a filter_size and Dense. As well as in model fit function, I have used less numbers of epochs. Then executed and got the more accuracy.

Model evaluate and prediction

Model evaluate :-

Here model evaluate mean whatever run numbers of epochs in model fit that have each epoch activity represented by history function with visualize. Then finally I have to prediction more accuracy used by model.evaluate function.
model.evaluate(x_test,y_test)

Prediction :-

"Consumer complaint not disputed" predict is 81%

Conclusion

A lack of complaints or a small number of complaints against a product, issue, or firm in the database does not necessarily imply that there is little or no consumer harm. I have taken a Consumer disputed? Data for prediction against a product in which more accuracy come out. So over all to be seen you have pick a any consumer column data against a product that has been better prediction come out.

Thank you