أكاديمية سدايا

SDAIA Academy

T5   Boot Camp

Data Science

Project MVP

No.5 Final Project (Deep Learning)

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- **MVP Goal:**

Creating an interactive AI call using deep learning to speed up employee services and improve quality of adding or follow-up any requests from users.

- **Tools:** we will use Twilio to convert the voice to text and then take decision based on the Trager word that we set in our model after that convert the text to voice.

- **Models:**

We use different models such as LSTM (long short term memory), Skip grams, RNN(recurrent neural network) and until now the more accurate model were LSTM with 76% accuracy.

- **Here we have the model summery:**

```
Model: "model_1"
_____
 Layer (type)                Output Shape              Param #
=================================================================
 input_2 (InputLayer)        [(None, 50)]              0

 embedding_1 (Embedding)     (None, 50, 300)           52500

 bidirectional_1 (Bidirectio (None, 512)               1140736
 nal)

 dense_2 (Dense)             (None, 128)               65664

 dropout (Dropout)           (None, 128)               0

 dense_3 (Dense)             (None, 19)                2451

=================================================================
Total params: 1,261,351
Trainable params: 1,208,851
Non-trainable params: 52,500
_____
```

- **For the accuracy we get 76% as you can see blow:**

```
786ms/step - loss: 0.8870 - accuracy: 0.7677 - val_loss: 1.2949 - val_accuracy: 0.686
```