

DEEP LEARNING PROJECT

Ángela María Arias
Raúl Andrés Pardo Moreno

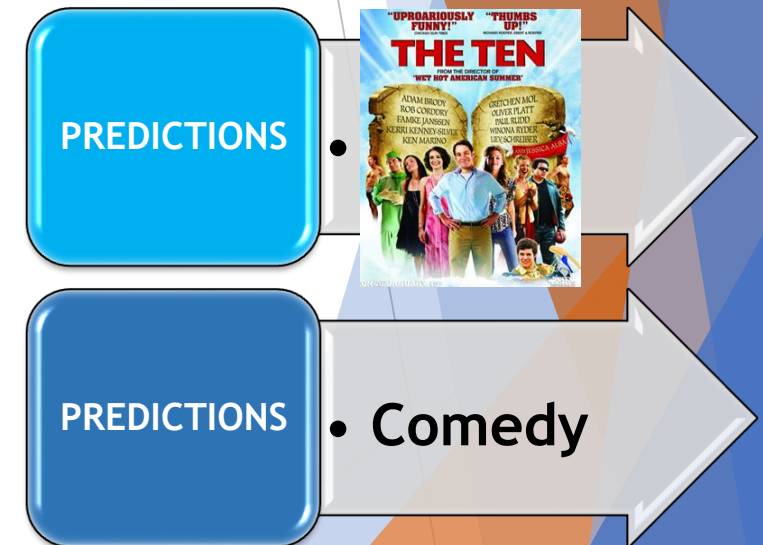
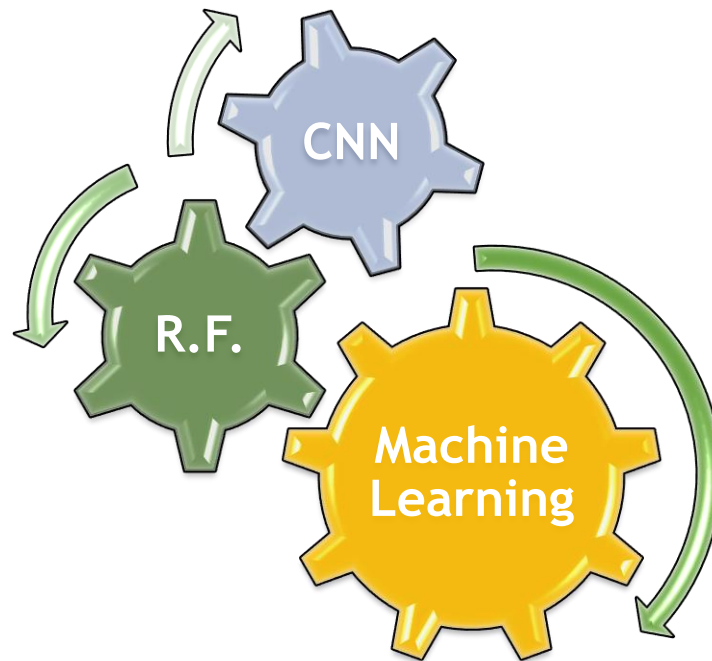
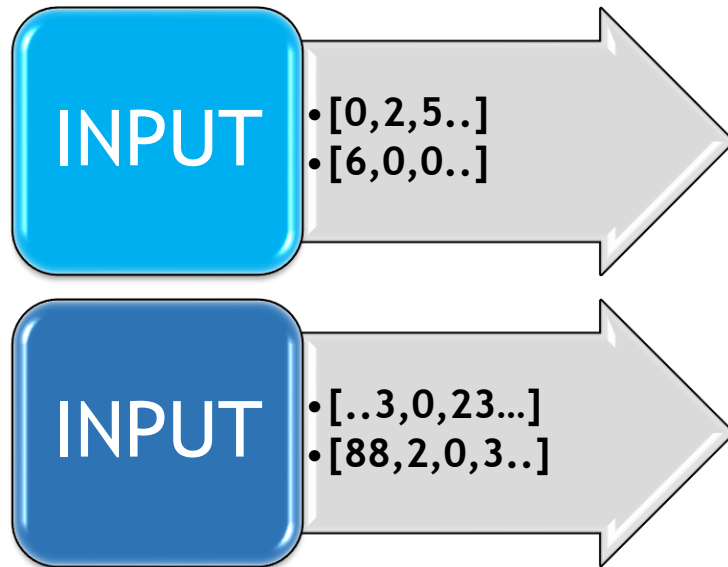
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STEP BY STEP

PREDICTORS

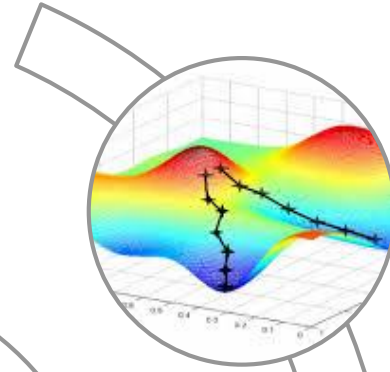
MODELS

RESULTS

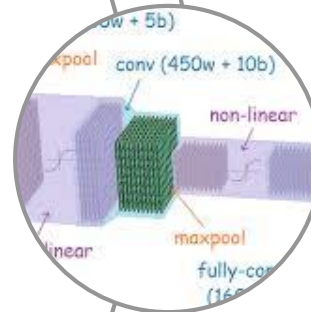


Our models:

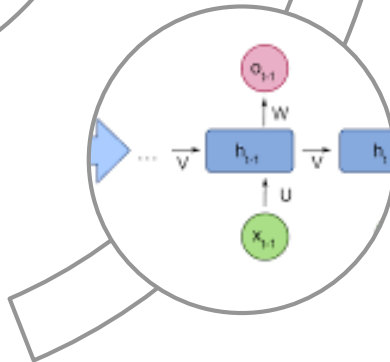
Images



**Gradient
Boosting**



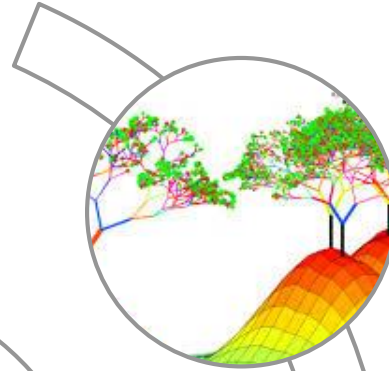
**Convolutional
Neural
Network**



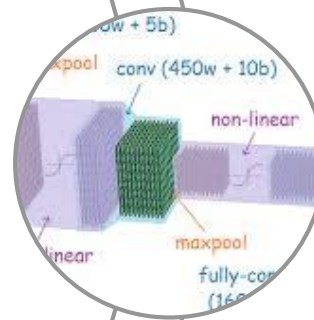
**Recurrent
Neural
Network**

Our models:

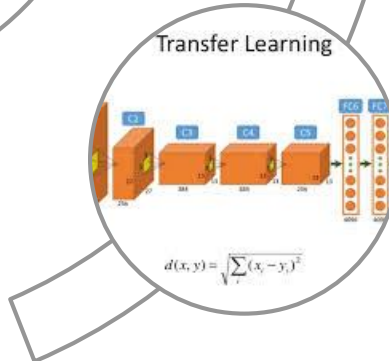
Text



Random
Forest
Classifier



Convolutional
Neural
Network



Transfer
Learning

The results:

Apply CountVectorizer.

```
1 from sklearn.feature_extraction.text import CountVectorizer
2 x_vector=CountVectorizer(max_features=9500) #(ngram_range=(1,2),max_features=9500)
3 X_input=x_vector.fit_transform(full_data['plot'])
```

```
1
2 from keras.layers.embeddings import Embedding
3
4 model2=Sequential()
5 model2.add(Embedding(7895,32,input_length=9500))
6 model2.add(Flatten())
7 model2.add(Dense(256,activation='relu')) #,input_shape=((X_input_train.shape)[1],))
8 model2.add(Dense(24,activation='sigmoid'))
9 model2.compile(loss='categorical_crossentropy',optimizer='adam',metrics=['accuracy'])
```

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