P38 - Movie Reviews

CLASSIFICATION
From ML to API and Real world Application example

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Model
Large Movie Review Dataset

This is a dataset for binary sentiment classification containing substantially more data than previous benchmark datasets. We provide a set of 25,000 highly polar movie reviews for training, and 25,000 for testing. There is additional unlabeled data for use as well. Raw text and already processed bag of words formats are provided. See the README file contained in the release for more details.

Large Movie Review Dataset v1.0

When using this dataset, please cite our ACL 2011 paper [bib].

Contact

For comments or questions on the dataset please contact Andrew Maas. As you publish papers using the dataset please notify us so we can post a link on this page.

Publications Using the Dataset

Andrew L. Maas, Raymond E. Daly, Peter T. Pham, Dan Huang, Andrew Y. Ng, and Christopher Potts. (2011). Learning Word Vectors for Sentiment Analysis. The 49th Annual Meeting of the Association for Computational Linguistics (ACL 2011).
Hello. Welcome to TensorFlow Hub.

The TensorFlow Hub lets you search and discover hundreds of trained, ready-to-deploy machine learning models in one place.

See more info

Text Problem Domains

- Embedding (170)
- Language model (43)
For word embedding we used pretrained embedding model from **TfHub**, which is Token based text embedding trained on English Google News 7B corpus.

For more pretrained models you can check [Tensorflow Hub](https://tfhub.dev).
API of project
Using FastAPI
import tensorflow as tf
import numpy as np

class Model:
    def __init__(self):
        self.model = tf.keras.models.load_model('myModel')
        self.version = 1.0
        self.accuracy = "86%"

    def predict_proba(self, review):
        return self.model.predict([[review]])[0][0]
from fastapi import FastAPI
from tfModel import Model
from fastapi.middleware.cors import CORSMiddleware

text_model = Model()

def predict(review: str):
    predicted_proba = float(text_model.predict_proba(review))
    predicted_class = round(predicted_proba)

    return {
        'model': {
            'accuracy': text_model.accuracy,
            'version': text_model.version
        },
        'prediction': {
            'proba': predicted_proba,
            'class': predicted_class
        }
    }

def greet():
    return {'message': 'Welcome to our Movie Classifier API!'}
REAL-WORLD Example using Django
We will use following resources
Qarabagin izinde

Qarabagin izinde is a documentary about Azerbaijan-Armenia war in 1988-1994. It also contains war scenes and soldiers speeches. It was filmed by Azerbaijani journalists in war time.

Thor Ragnarok

Imprisoned on the planet Sakaar, Thor must race against time to return to Asgard and stop Ragnarok, the destruction of his world, at the hands of the powerful and ruthless villain Hela.

Iron Man 1

After being held captive in an Afghan cave, billionaire engineer Tony Stark creates a unique weaponized suit of armor to fight evil.
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Reviews:
Average reviews: 5.24/10

<table>
<thead>
<tr>
<th>Rating</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>😊😊😊😊😊</td>
<td>That's good</td>
</tr>
<tr>
<td>😊😊😊😊</td>
<td>Badddd</td>
</tr>
<tr>
<td>😊😊😊</td>
<td>I like it</td>
</tr>
<tr>
<td>😊😊😊😊😊😊</td>
<td>I don't like it. It is very bad and bullshit</td>
</tr>
<tr>
<td>😊😊😊😊😊😊</td>
<td>The most amazing thing I have ever seen</td>
</tr>
<tr>
<td>😊😊😊😊😊</td>
<td>This movie is great</td>
</tr>
<tr>
<td>😊😊😊😊😊</td>
<td>This is most beautiful thing ever. Great job</td>
</tr>
<tr>
<td>😊😊😊😊😊😊</td>
<td>The metal composition could be better. It should improve</td>
</tr>
<tr>
<td>😊😊😊😊😊😊</td>
<td>Idioticmoric</td>
</tr>
<tr>
<td>😊😊</td>
<td>Horrendous</td>
</tr>
</tbody>
</table>
Thor Ragnarok

Imprisoned on the planet Sakaar, Thor must race against time to return to Asgard and stop Ragnarök, the destruction of his world, at the hands of the powerful and ruthless villain Hela.

Reviews:

Average reviews: 6.67/10

I like it 😊

I don’t like it 😞

Violence in movies is good but sometimes you have to avoid killing man. 😞

Add Review

Comment

The movie generally is good, however I did not like it much. ❗
Summary

We will use following resources
THANKS
For your attention!