

Emotions from text

Project Code: 45

Introduction

Text doesn't only communicate informative contents, but also attitudinal information, including emotional states.

Language detection, intent, emotion and sentiment analysis are all based on supervised systems.

Problem Statement

The goal is to classify the emotional affinity of sentences in a corpus of sentences and text. If we have a sentence s with emotions classified as em_1, em_2, em_3, \dots , then we have to define a mapping from $s \rightarrow em_i$ (one or more emotions). The mapping is based on $F = \{f_1, f_2, \dots, f_n\}$, where F contains the features derived from the text.

Proposed approach

Determining emotion of a linguistic unit can be cast as a multi-class classification problem.

Different Models:

1. LSTM-CNN

LSTM though, is a good model, is very slow. In order to speed up the training time, we also include Convolutional layer in the network. It is far better than pure CNN, Pure LSTM, and CNN-LSTM. LSTM also enables us to get the context from longer sentences. They pass a "filter" over the data and calculate a higher-level representation. They work surprisingly well for text, even though they have none of the sequence processing ability of LSTMs. Feature extraction is the main key, enabling us to . LSTM can selectively remember or forget states.

2. Naive Bayes:

The naive bayes model enables fast classification computation.

Timeline

First Phase-

LSTM -CNN model to be implemented.

Second Phase-

Comparison of the LSTM-CNN model with already existing models

Github Link

<https://github.com/himani19/EmotionsFromText.git>

Team Members:

1. Padma Dhar (2018201011)
2. Divyanshi Kushwaha (2018201046)
3. Priya Upadhyay (20181202012)
4. Himani Gupta (2018202014)

Faculty Name:

Dr Ravi Kiran