

Using millions of emoji occurrences to learn
any-domain representations for detecting sentiment,
emotion and sarcasm

COMP8240 Group D Project Proposal

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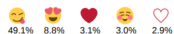
Overview

- Motivation
- Benchmark datasets
- Method
- Demo

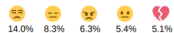
Motivation

It is published at **EMNLP** and globally ranked 1st in **Sarcasm detection**. It uses 1246 million tweets containing about 64 common emojis on 8 benchmark dataset to predict sentiment, emotion, and sarcasm.

I love mom's cooking



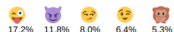
I love how you never reply back..



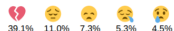
I love cruising with my homies



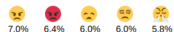
I love messing with yo mind!!



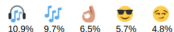
I love you and now you're just gone..



This is shit



This is the shit



Benchmark datasets

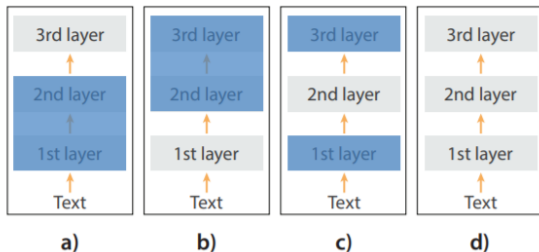
Code can be found in <https://paperswithcode.com/paper/using-millions-of-emoji-occurrences-to-learn>. It uses 8 benchmark datasets.

- **Olympic:** negative and high control, positive and high control, negative and low control, positive and high control.
- **PsychExp:** joy, fear, anger, sadness, disgust, shame, guilt
- **SCv1:** not sarcastic, sarcastic
- **SCv2-GEN:** not sarcastic, sarcastic
- **SE0714:** fear, joy, sadness
- **SS-Twitter:** negative, positive
- **SS-Youtube:** negative, positive
- **kaggle-insults:** neutral, insult

Method

- **Pretraining:-** The data is split into a training, validation and test set, where the validation and test set is randomly sampled in such a way that each emoji is equally represented.
- **Model Used:-** It uses LSTM, fast text classification, DeepMoji model to predict the accuracy of the classifiers.
- **Transfer learning:-** It uses approach in which all layers in the model are frozen when fine-tuning on the target task except the last layer.

Method



In the figure, each layer is fine tuned separately. The layers covered in blue rectangle are frozen.

Demo

We will be reproducing the demo as per <https://deepmoji.mit.edu/>

DeepMoji has learned to understand emotions and sarcasm based on millions of emojis. Here's a [video](#) explaining a bit more. Type a sentence to see what our AI algorithm thinks.

You love hurting me, huh?

SUBMIT

Words are highlighted based on emotional impact. Click a word to turn it on/off.

you love hurting me , huh ?



high confidence