



Predicting Humor in Headlines

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Task Description

- Implement a regression based model to predict humor in a dataset of headlines
- Dataset consists of headlines taken from the Humicroedit dataset
- https://competitions.codalab.org/competitions/20970#learn_the_details-overview

Task Description

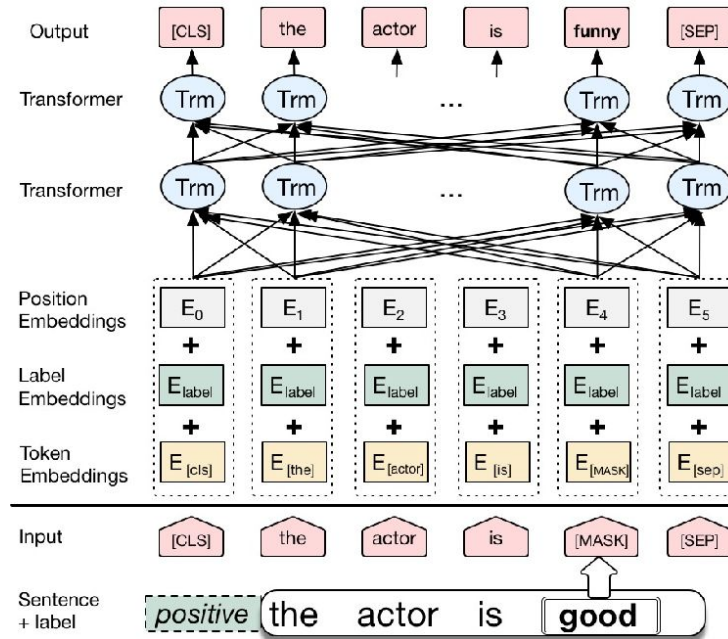
- Single word edits to headlines for comedic effect
- Labeled scores on a 0-3 scale of “funineess”
- Averaged across 5 human scores

System Design

- We use a single regression pre-trained BERT model run on the sentence embeddings of our training data.
- BERT then fine-tuned on our headline data
- Evaluated as a single-regression task with RMSE loss
- Note: Due to access to external GPUs, we are able to fine-tune BERT itself

System Design

(Schematic of BERT architecture:)



Approach

- Inputs to the model are raw sentence embeddings

Hyperparameters

- Tuned model across 4 epochs
- Attempted various batch-sizes:
 - 32, 16, 8, 4

Results

results for subtask1:

baseline: 0.57471

BERT single regressor:

task A RMSE results:

epochs	batch=32	batch=16	batch=8	batch=4
1epochs	0.54199	0.54312	0.53396	0.53438
2epochs	0.53324	0.54381	0.5383	0.54047
3epochs	0.54728	0.54737	0.56014	0.55393
4epochs	0.55964	0.55747	0.56742	0.56569

Discussion

- For our primary task, our BERT model performs impressively well
 - (Butting up against the baseline)
- Can expand from a single regression
- Can further fine tune a downstream, feature based model on our input

Related Reading

<https://arxiv.org/pdf/1810.04805.pdf>

<https://arxiv.org/pdf/1904.02232.pdf>