

Assignment- Emolnt

Existing emotion datasets are mainly annotated categorically without an indication of degree of emotion. So what we are doing here is taking a text/tweet and an emotion X and then determining the intensity or degree of emotion X felt by the speaker.

Evaluation: For each emotion, systems are evaluated by calculating the Pearson Correlation Coefficient with Gold ratings and Spearman Rank Coefficient of the submission with the gold scores of the test data.

Datasets: There are 4 emotions i.e anger, fear, joy, and sadness.

Procedure to develop results:

1. We have installed and imported the necessary libraries for the program.
2. Respective datasets- with intensity and without intensity of specific emotion are imported to the file program.
3. Pre processing of the text files and the required filtering is done with help of basic natural language processing commands.
4. The given evaluation metrics is implemented i.e. pearson correlation coefficient and spearman rank coefficient as asked in the competition file.
5. The ML and DL algorithm is executed to see the values.

Results:

A. Purely statistical model (other machine learning methods are allowed)

1. Random Forest Regression: It is a supervised learning algorithm that uses ensemble learning method for regression.

Emotion	Pearson(Test)	Spearman(Test)
1. Anger	0.26	0.16
2. Fear	0.44	0.40
3. Joy	0.25	0.25
4. Sadness	0.53	0.49

2. Support Vector Machine: It is a supervised machine learning algorithm that can be used for both classification or regression challenges.

Emotion	Pearson(Test)	Spearman(Test)
5. Anger	0.29	0.16
6. Fear	0.42	0.38
7. Joy	0.23	0.20
8. Sadness	0.51	0.47

B. Deep learning model

1. Neural networks: These are a set of algorithms, modeled loosely after the human brain, that are designed to recognize patterns.

Emotion	Pearson(Test)	Spearman(Test)
9. Anger	0.20	0.09
10. Fear	0.38	0.35
11. Joy	0.19	0.17
12. Sadness	0.46	0.44

* Codalab username - rasmikab

* Some of the datasets given in Codalab were inappropriate especially. for anger(with intensity-test) data.