Title:
Sarcasm Detection Using Deep Learning

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Description of the problem:
Sarcasm detection is modeled as binary classification problem, where given a sentence it will classify it as sarcastic or non-sarcastic. Sarcasm has an implied negative sentiment, but a positive surface sentiment. Detecting sarcasm automatically is useful for opinion mining and reputation management, which attract interest of NLP community.

Brief Description:
There have been many researchers working on finding the best technique to detect sarcastic sentence using large datasets. People have used different types of NLP techniques to get good accuracy. Some researchers focused on getting good features, while some were more focused on the approach. There are three approaches which are really popular among all, Supervised classification, Semi-Supervised and Rule-based. Some of the top features are Unigram, Sentiment, Pragmatic and Patterns. But, very few approaches have explored deep learning-based architectures so far. There is a small community who are currently trying different deep learning algorithms for sarcasm detection. What I would like to propose is to implement a deep learning algorithm which learns from the data and creates a model which then can be use to predict sarcastic sentence with good accuracy.

Preliminary plan:

1. Gather Data
2. Data preprocessing
3. Feature extraction
4. Plan the architecture
5. Implement Deep Learning Algorithm
6. Evaluation

Reference:

1. Soujanya Poria, Erik Cambria, Devamanyu Hazarika, Prateek Vij. 2016. A Deeper Look into Sarcastic Tweets Using Deep Convolutional Neural Networks

2. Meishan Zhang, Yue Zhang and Guohong Fu. 2016. Tweet Sarcasm Detection Using Deep Neural Network

3. Aniruddha Ghosh and Tony Veale. 2016. Fracking sarcasm using Neural Network