



Clickbait Classifier

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Clickbait Definition

Social media posts that are, at the expense of being informative and objective, designed to entice its readers into clicking an accompanying link

Our project classifies clickbait to combat social media's misleading exploitation of the user

Man Tries to Hug a Wild Lion, You Won't Believe What Happens Next!

EARTH FORM — 1620 COMMENTS



15 hilarious tweets of stupid people that makes you think 'Do these people even exist?'



Edviin!
@Edviin_

Man its so crazy that the earth is soon gonna be 2017 years old

RETWEETS
2

LIKES
10



9:21 PM - 26 Dec 2016 from Borås, Sverige

Data Used

Data set of 19538 (4761 clickbait, 14777 not clickbait)

15,000 training 4,538 test [Downloaded Data](#)

Data Obtained

- Id
- Post Time Stamp
- Post Text
- Target Text
- Target Description
- Target Keywords
- Target Paragraphs
- Target Captions



Comparing approaches

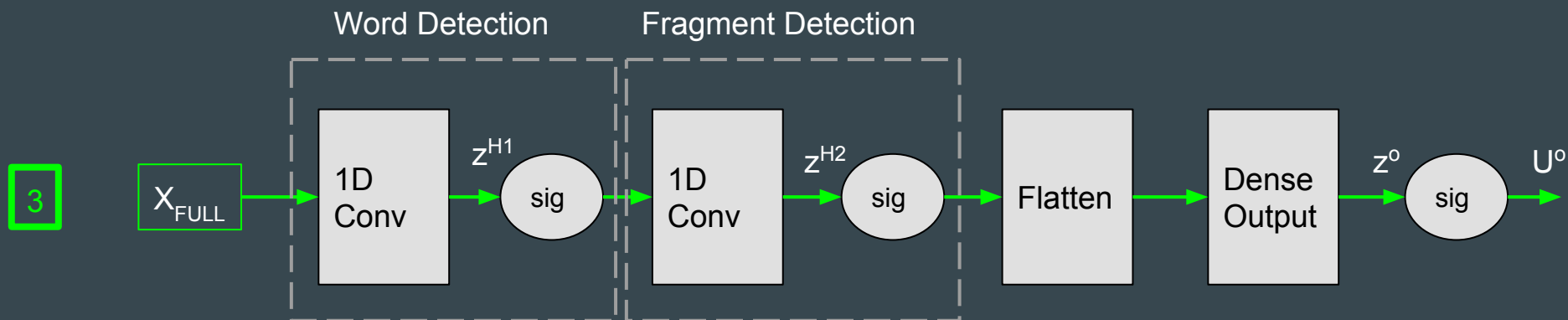
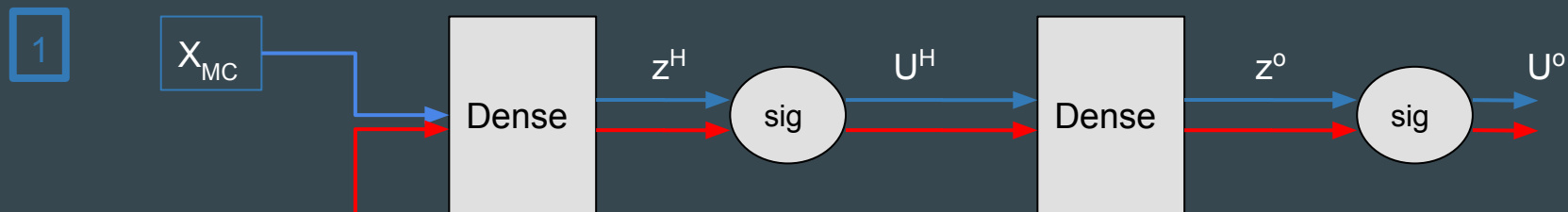
X_{MC} Approach

- Define features
 - Number of words in title
 - Number of words in body text
 - If title is a question
 - Number of questions in title
 - Number of bait words
 - Bait word score of title
 - Number of context words in title
 - Context word score of title
 - Number of context words in body text
 - Context word score of body text
 - Pronoun score of title
 - Number of pronouns in title
 - Pronoun score of body text
 - Twitter handle in body text
 - If numbers are in title
 - Number of sentences in paragraph

X_{Full} & X_{FULL} Text Processing Approach

- Assigns a numeric value to every character
- Run through a neural network
- Identify patterns
- Normalize all values in X_{FULL} between -1 to 1

Approach



Shift Variant vs Invariant

Consider 2 sentence fragments:

You won't believe what happens next!

What happens next, you won't believe!

Shift Variant System (Dense layer):

- Picks up “won’t believe” in first sentence but not second
- Only able to filter entire sequence for word in one order

Shift Invariant System (Convolutional layer):

- Picks up “won’t believe” in both sentences
- Treats sentence as a sequence, and is able to filter the entire sentence for a word or phrase

Results

1

- < 60% training and test accuracy
- Necessary for deeper set of features

2

- Training Accuracy: 97%
- Test Accuracy: 68%
- Overfitting
- Dense layer weights are not shift invariant
- Large local minima at 76.34% training accuracy that optimizer must overcome

3

- Training Accuracy: %
- Test Accuracy: %
- 1D Convolution is shift invariant

Resources

- [Text Processing Techniques Used](#)
- [Keras Documentation](#)
- [Data and Challenge](#)
- [Our Code](#)