
Natural Language Inference for Fake News Detection

— 2019 NLP Project 1 —

Task Description

Classification of news article

Given the title of a fake news article **A** and the title of a coming news article **B**, students are asked to classify **B** into one of the three categories.

- agreed: **B** talks about the same fake news as **A**
- disagreed: **B** refutes the fake news in **A**
- unrelated: **B** is unrelated to **A**

Data

Download: [\[link\]](#)

Example:

- A: 用大蒜鉴别地沟油的方法,怎么鉴别地沟油
- B: 吃了30年食用油才知道, 一片大蒜轻松鉴别地沟油
 - Agreed
- A: "飞机就要起飞, 一个男人在机舱口跪下!"这是最催泪的一幕
- B:「网警辟谣」飞机起飞前男人机舱口跪下? 这故事居然是编的!
 - Disagreed
- A: 吃榴莲的禁忌,吃错会致命!
- B: 榴莲不能和什么一起吃 与咖啡同吃诱发心脏病
 - Unrelated

Data

csv format

```
1 |id,tid1,tid2,title1_zh,title2_zh,title1_en,title2_en,label
2 |0,0,1, 2017养老保险又新增两项, 农村老人人人可申领, 你领到了吗,警方辟谣“鸟巢大会每人领5万” 仍有老人坚持进京,There are two new old-age insurance benefits for old people
   |in rural areas. Have you got them?,"Police disprove ""bird's nest congress each person gets 50,000 yuan"" still old people insist on going to beijing",unrelated
3 |3,2,3,"""你不来深圳, 早晚你儿子也要来""", 不出10年深圳人均GDP将超香港",深圳GDP首超香港? 深圳统计局辟谣: 只是差距在缩小,"""If you do not come to Shenzhen, sooner or later
   |your son will also come."" In less than 10 years, Shenzhen per capita GDP will exceed Hong Kong.",Shenzhen's GDP outstrips Hong Kong? Shenzhen Statistics Bureau
   |dismisses rumors: only the gap is narrowing,unrelated
```

Evaluation

Weighted accuracy

- The weights of the three categories, agreed, disagreed and unrelated are $1/15$, $1/5$, $1/16$, respectively.
- [sklearn.metrics.accuracy_score\(\)](#) or `numpy.average()` given the weights

Report

- report.pdf
 - Name and ID
 - Division of Work
 - Methods
 - Experiments (ex. accuracy on validation set)
 - Discussion
 - Conclusion
- Code
 - Write the proper comment for each part and function
- Presentation (5 min)
 - State your idea, methodology, evaluation and conclusion clearly and logically
- Grading Policy
 - report: 60%; presentation: 30%, performance: 10%
 - Bonus: 1st~ 3rd +10%; 4th~6th +5%

Submission

- project1_team_<team number>.zip
 - report_team_<team number>.pdf
 - **submission_<team number>.csv**
 - code_team_<team number>
 - Readme
 - *script 1*
 - *script 2*
 - ...
- project1_team_0.zip
 - report_team_0.pdf
 - **submission_0.csv**
 - code_team_0
 - readme.txt
 - function.py
 - main.py

Important Date

- 3/28 release project 1
- 5/10 report and code submission due
- 5/15 slide submission due
- 5/16 presentaiton

Resource

1. Basic Siamese Network & LSTM: [\[link\]](#)
2. pytorch-pretrained-BERT: [\[link\]](#)
3. Handcraft feature : *Transferring, Transforming, Ensembling: The Novel Formula of Identifying Fake News* [\[link\]](#)
4. WSDM - Fake News Classification: [\[link\]](#)
5. Chinese dictionary: [\[link\]](#)
6. Quora Question Pairs - Can you identify question pairs that have the same intent?: [\[link\]](#)
7. {mhfu, thtang}@nlg.csie.ntu.edu.tw