

NLP Project

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1 Phase 1: Crawling And Cleaning Data

Github Repository Link: [Click here](#).

1.1 Step 1: Data Crawling

At first we should find websites that include match reports and player's ratings of a match in a single pages. The best website for this is SkySport. Then we should find and store urls of that pages. This urls has been crawled from a webpage that contains all matchs. For crawling we use Scrapy framework. At first we should crawl all URLs from SkySport. So we should crawl urls from a page contains all urls. In this page there will be all urls of all matches. We should choose seasons that we want. In this project we have chosen Premier league, Champions league and Fifa World Cup.

All matches page link: [Click here](#).

Then we have been crawled urls of pages contains reports from this page and save them as a csv file. We have developed a spider that do this. you can see it in MatchURLSpider.py.

Results:

After that we have crawl reports and player ratings from each urls in dataset above. This informations have been crawl by a spider that you can see in Soc-

	Unnamed: 0	url
0	0	https://www.skysports.com/football/burnley-vs-bournemouth/373467
1	1	https://www.skysports.com/football/crystal-palace-vs-west-bromwich-albion/373468
2	2	https://www.skysports.com/football/huddersfield-town-vs-arsenal/373469
3	3	https://www.skysports.com/football/liverpool-vs-brighton-and-hove-albion/373470
4	4	https://www.skysports.com/football/manchester-united-vs-watford/373471
5	5	https://www.skysports.com/football/newcastle-united-vs-chelsea/373472
6	6	https://www.skysports.com/football/southampton-vs-manchester-city/373473
7	7	https://www.skysports.com/football/swansea-city-vs-stoke-city/373474
8	8	https://www.skysports.com/football/tottenham-hotspur-vs-leicester-city/373475
9	9	https://www.skysports.com/football/west-ham-united-vs-everton/373476

	Unnamed: 0	report	ratings
0	0		
1	1		
2	2		
3	3		
4	4		
5	5		
6	6		
7	7		
8	8		
9	9		

	sent132	sent133	sent134	sent135	sent136	player0	rating0
0	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	McCarthy	True
1	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Pope	True
2	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Hennessey	False
3	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Karius	True
4	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Romero	False
5	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Lossl	True
6	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Fabianski	True
7	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Dubravka	True
8	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Lloris	True
9	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Adrian	True
10	iPAD¿	iPAD¿	iPAD¿	iPAD¿	iPAD¿	Fabianski	False

cerSpider.py. In this spider we read urls CSV file and then crawl all informations from each url.

Results:

1.2 Setp 2: Cleaning Data

For this section we have to clean datas that we crawled before. We should tokenize reports of matchs by sentences and words. For first one we split report by dots and for second one we split them by spaces. Then we should clean player ratings. player ratings are in range 0 to 10. We should set ratings true if they are bigger than 6 and set false otherwise.

tokenized by sentences:

tokenized by words:

1.3 Step 3: Metrics

For this section we should get most regular words, unique words of each reports and At first we should create new datasets that contains of sentences

	word2249	word2250	word2251	word2252	word2253	player0	rating0
0	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	McCarthy	True
1	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Pope	True
2	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Hennessey	False
3	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Karius	True
4	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Romero	False
5	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Lossl	True
6	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Fabianski	True
7	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Dubravka	True
8	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Lloris	True
9	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Adrian	True
10	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	¡PAD¿	Fabianski	False

	Unnamed: 0	sents
7	7	Solanke clinically finished a scintillating counter involving Salah and Firmino to finally br

that belongs to positive and negative players. We have done it in PandNSeperation.py. In this script we separate sentences belong to negative players and positive players and then save them in 2 separated CSV file; negative and positives.csv. In this datasets, there are separated sentences.

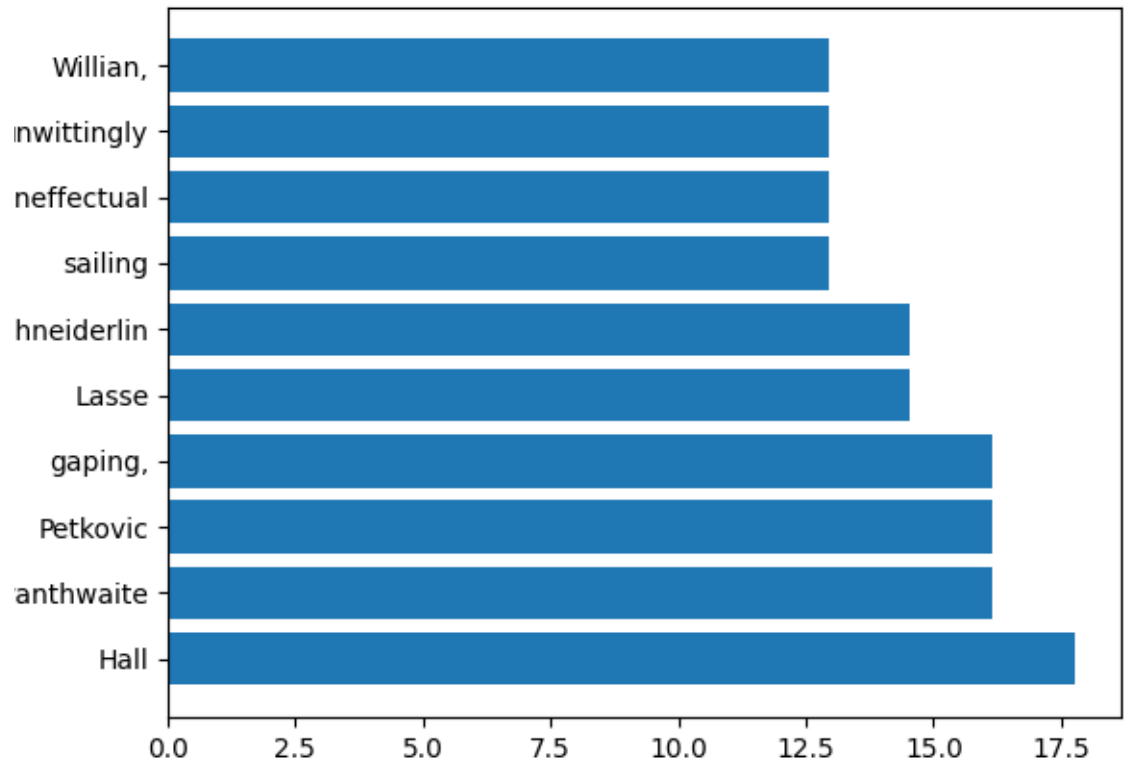
Results for negative:

Results for positives:

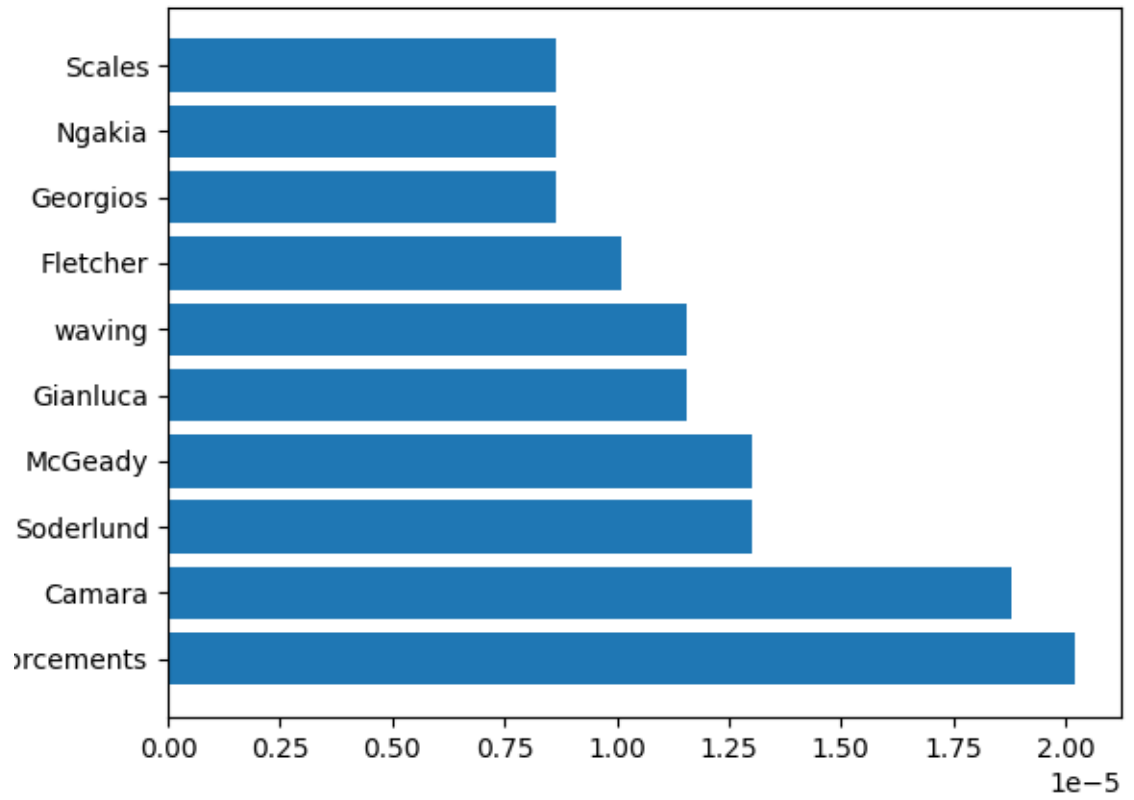
Then we should get metrics from that datas. So we write a script that get all metrics. In SeparatedDataGetMetrics.py all metrics of separated datas has been gotten. You can see all metrics as follow:

top10CommonNegativeWordsFrequency:

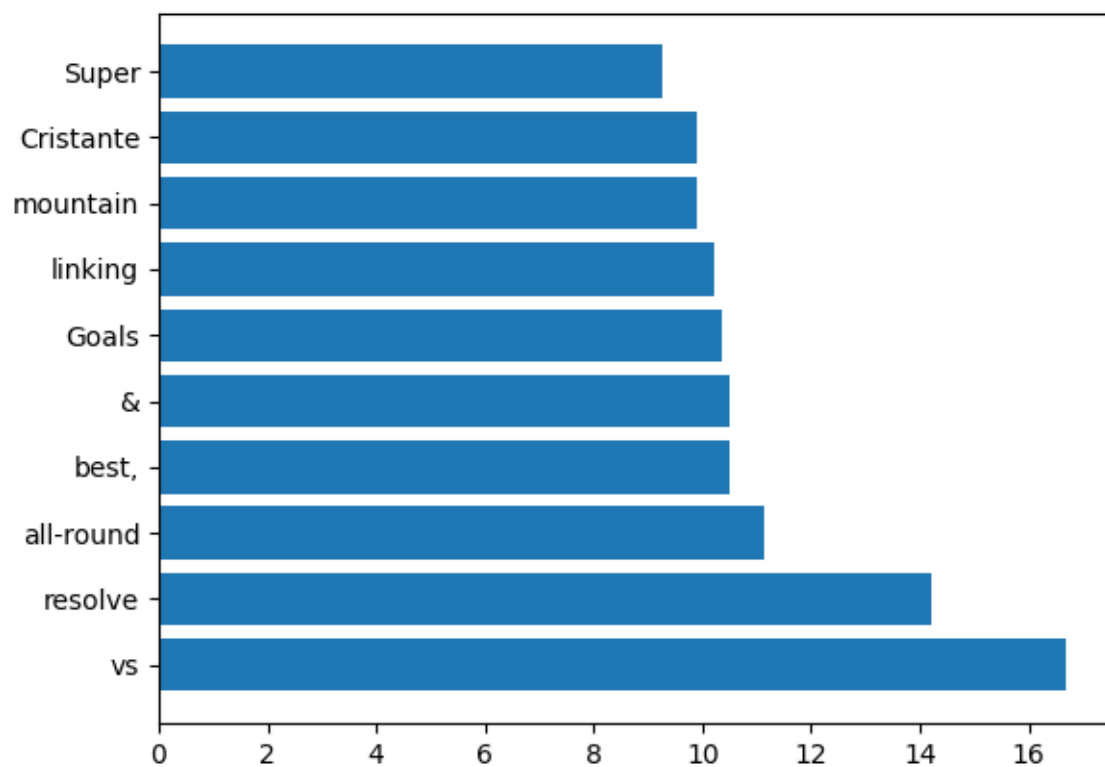
	Unnamed: 0	sents
7	7	The contest did not really come alive until the 20th minute when England hopeful Nick F



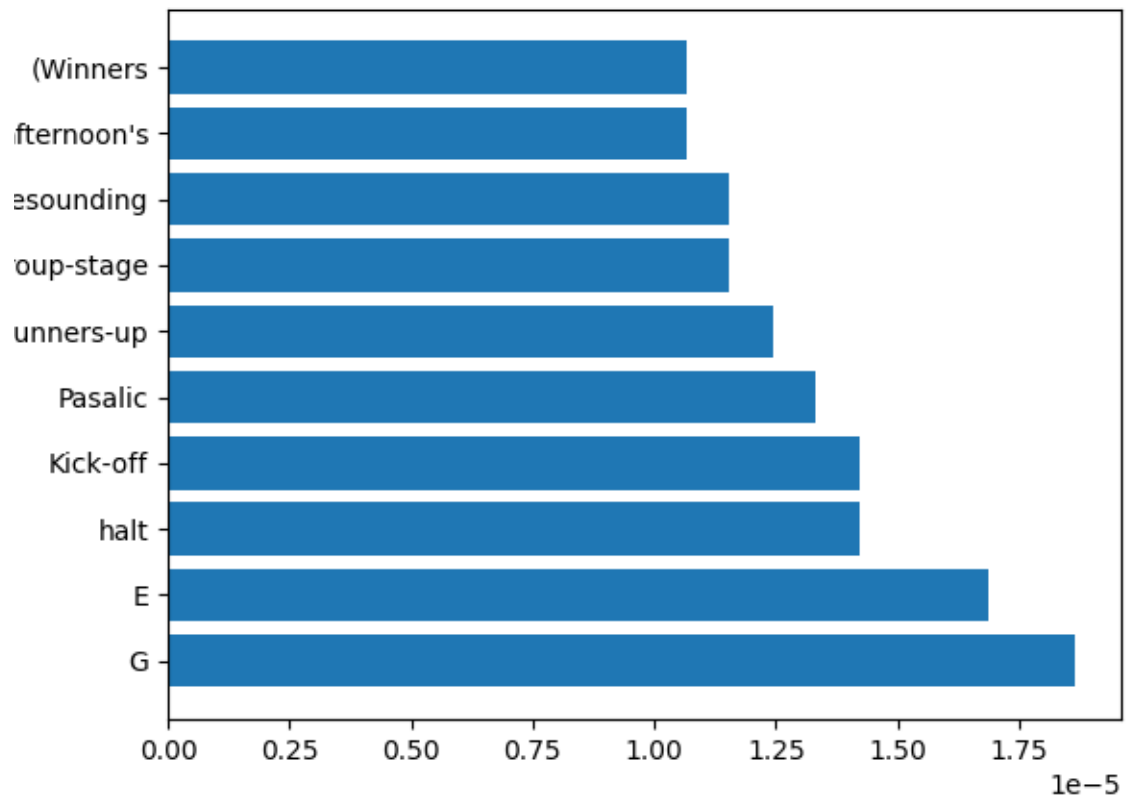
top10CommonNegativeWordsTFIDF:



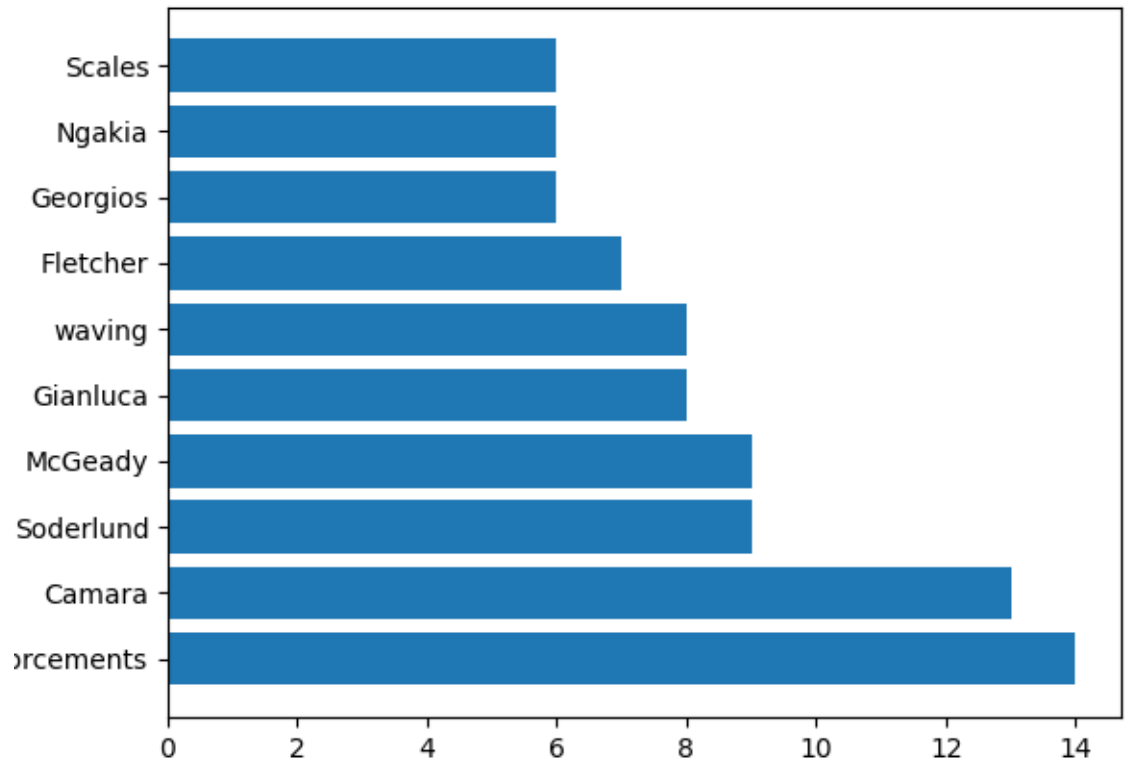
top10CommonPositiveWordsFrequency:



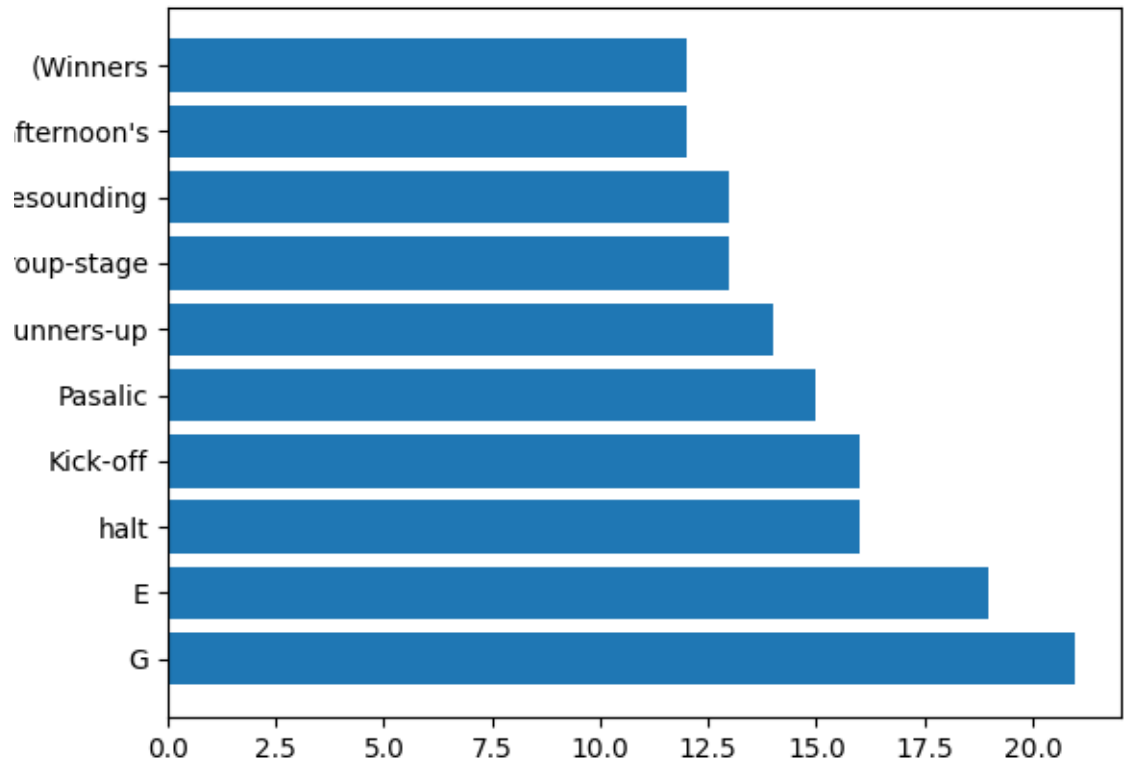
top10CommonPositiveWordsTFIDF



top10NegativeWordsCount



top10PositiveWordsCount



After that we should get metrics from new datasets.

2 Phase 2: Model Implimentation

comming soon!