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CS4650
3/26/2022

[CS 4650] HW 5

Github Url:

https://github.com/KingFuGitHub/Natural-Language-Processing/blob/master/Natural%20Language%20Processing.py

Screen capture of my code:

```python
 Natural Language Processing.py > ...
 1    import spacy
 2    from newsapi import NewsApiClient
 3    from spacy.lang.en import English
 4    # Natural Language Processing
 5    nlp = spacy.load('en_core_web_lg')
 6
 7    newsapi = NewsApiClient(api_key='02f0ae732bcb4f2db1d77ef4288f237e')
 8
 9    data = newsapi.get_everything(q='coronavirus', language='en', from_param='2022-03-04',
10                                  to='2022-03-24', sort_by='relevancy', page=5)
11    articles = data['articles']
12
13    for index, x in enumerate(articles):
14        print("Article: "+ str(index+1) + ": "+ str(x['title']))
15        doc = nlp(x['content'])
16        print("Keywords: ")
17        for index, ent in enumerate(doc.ents):
18            print(str(index+1)+". "+str(ent.text) + " (" + str(ent.label_)+")")
19        print()
20
```

Outputs:

```
Article: 1: Fed hikes interest rates, battles inflation - Reuters
Keywords:
1. The Federal Reserve (ORG)
2. Wednesday (DATE)
3. a quarter (CARDINAL)
4. next year (DATE)

Article: 2: China seen easing medium-term borrowing costs as COVID risks grow - Reuters.com
Keywords:
1. March 14 (DATE)
2. Reuters (ORG)
3. China (GPE)
4. second (ORDINAL)
5. this year (DATE)
6. Reuters (ORG)
7. Monday (DATE)

Article: 3: Former Takeda vaccine chief to lead new COVID antiviral venture Aerium - Reuters.com
Keywords:
1. CHICAGO (GPE)
2. March 22 (DATE)
3. Reuters (ORG)
4. Tuesday (DATE)
5. Rajeev Venkayya (PERSON)
6. two (CARDINAL)

Article: 4: AstraZeneca antibody cocktail retains activity against Omicron subvariants - Reuters
Keywords:
1. March 21 (DATE)
2. Reuters (ORG)
3. Monday (DATE)
4. COVID-19 (PERSON)
5. Omicron (ORG)

Article: 5: Air Canada to add 26 Airbus A321neo aircraft to its fleet - Reuters.com
Keywords:
1. March 22 (DATE)
2. Reuters (ORG)
3. AC.TO (GPE)
4. Tuesday (DATE)
5. 26 (CARDINAL)
6. Airbus A321neo (ORG)

Article: 6: Fed hikes interest rates, battles inflation - Reuters
Keywords:
1. The Federal Reserve (ORG)
2. Wednesday (DATE)
3. a quarter (CARDINAL)
```

Article: 7: Biden will deliver remarks on law to bolster protections for women facing violence - Reuters
Keywords:
1. WASHINGTON (GPE)
2. March 16 (DATE)
3. Reuters (ORG)
4. U.S. (GPE)
5. Joe Biden (PERSON)
6. Wednesday (DATE)
7. the Violence Against Women Act (ORG)
8. a day earlier (DATE)

Article: 8: France's COVID-19 infections spike week-on-week following easing of restrictions - Reuters
Keywords:
1. PARIS (GPE)
2. March 21 (DATE)
3. Reuters (ORG)
4. France (GPE)
5. close to 90,000 (CARDINAL)
6. the last seven days (DATE)
7. 36% (PERCENT)
8. one week ago (DATE)

Article: 9: Hong Kong leader urges vaccinations as COVID infections swamp city - Reuters.com
Keywords:
1. HONG KONG (GPE)
2. March 11 (DATE)
3. Reuters (ORG)
4. Hong Kong (GPE)
5. Carrie Lam (PERSON)
6. Friday (DATE)
7. cor (ORG)

Article: 10: Australia's Myer Holdings reinstates dividend after four years - Reuters.com
Keywords:
1. March 10 (DATE)
2. Reuters (ORG)
3. Myer Holdings Ltd (ORG)
4. Thursday (DATE)
5. first (ORDINAL)
6. 2017 (DATE)
7. the second half of this year (DATE)

Article: 11: Omicron Surge Persists in Parts of Asia
Keywords:
1. Omicron (ORG)
2. East (LOC)
3. Southeast Asia (LOC)

Article: 12: Ont. confirms 20 virus-related deaths today; Number of COVID-19 patients in ICU drops to 246 - CP24 Toronto's Breaking News
Keywords:
1. Ontario (GPE)
2. 20 (CARDINAL)
3. today (DATE)
4. 779 (CARDINAL)

Article: 13: China battles multiple outbreaks of COVID-19; mass testing ordered - CP24 Toronto's Breaking News
Keywords:
1. TAIPEI (GPE)
2. Taiwan (GPE)
3. AP (ORG)
4. China (GPE)
5. Monday (DATE)

Article: 14: Second pandemic anniversary doesn't mark the end of COVID-19: Dr. Howard Njoo - CP24 Toronto's Breaking News
Keywords:
1. the beginning of 2020 (DATE)
2. Howard Njoo (PERSON)
3. first (ORDINAL)
4. avian (NORP)
5. 2004 (DATE)

Article: 15: COVID-19 update for March 22: No deaths, hospitalizations keep dropping | 2,500 unvaxxed B.C. health-care workers lost jobs | Health minister says no end in sight for federal restrictions - Vancouver Sun
Keywords:
1. daily (DATE)
2. B.C. (GPE)
3. daily (DATE)
4. B.C.Photo (GPE)

Article: 16: US Surgeon General orders tech companies to reveal sources of COVID-19 misinformation
Keywords:
1. Biden (PERSON)
2. Vivek Murthy (PERSON)
3. The Washington Post (ORG)

Article: 17: Hong Kong reports 37529 new COVID-19 cases, 150 deaths - Reuters.com
Keywords:
1. HONG KONG (GPE)
2. March 5 (DATE)
3. Reuters (ORG)
4. Hong Kong (GPE)
5. 37,529 (CARDINAL)
6. Saturday (DATE)
7. 150 (CARDINAL)

Article: 18: Almost a third of people report lingering symptom 6-12 months after COVID-19 -study - Reuters
Keywords:
1. March 4 (DATE)
2. Reuters (ORG)
3. third (ORDINAL)
4. at least one (CARDINAL)
5. between 6 and 12 months (DATE)
6. 152,000 (CARDINAL)
7. Denmark (GPE)

Article: 19: Belgium set to remove almost all COVID restrictions - Reuters.com
Keywords:
1. BRUSSELS (GPE)
2. March 4 (DATE)
3. Reuters (ORG)
4. Monday (DATE)

Article: 20: Bali welcomes first foreign tourists after COVID quarantine rule lifted - Reuters.com
Keywords:
1. the I Gusti (FAC)
2. the first day (DATE)