

Project Name: Word Embeddings Demo

Module Name: Front End (flask_web.py)

Check: Correctness of functionality of the front end of this project

Test Case ID	Test Scenario	Test Steps (NOTE: The top dir of the WordED project is denoted as WEDTop)	Test Data	Expected Results	Actual Results	Pass/Fail
TF1	Test the correctness of the index page	1. In Terminal, go to the top dir of the project WordED \$ cd WEDTop 2. In Terminal, run the below command \$ python3 flask_web.py 3. Go to site 127.0.0.1:5200	None	Set up a webpage at 127.0.0.1:5200	As expected (See Fig. 1, 2)	Pass
TF2a	Test the 'Near Analysis' with normal words	1. Go to site 127.0.0.1:5200 or 127.0.0.1:5200/wed 2. Click 'Near_Analysis' 3. Enter Keyword 4. Enter the top-k number and click 'Find_Near'	'interesting'	Show the top-k words near 'interesting', and the 2D and 3D figures	As expected (See Fig. 3, 4)	Pass
TF2b	Test the 'Near Analysis' with unknown words	1. Go to site 127.0.0.1:5200 or 127.0.0.1:5200/wed 2. Click 'Near_Analysis' 3. Enter Keyword 4. Enter the top-k number and click 'Find_Near'	'iabcdfead'	Show errors list in Terminal	As expected (See Fig. 5)	Pass

TF3a	Test the 'Between Analysis' with normal words	<ol style="list-style-type: none"> 1. Go to site 127.0.0.1:5200 or 127.0.0.1:5200/weds 2. Click 'Between_Analysis' 3. Enter Keyword 4. Enter the top-k number, the step-k number and click 'Find_Between' 	'school', 'interesting'	Show the top-k words near 'school' and 'interesting', the step-k words between 'school' and 'interesting', and the 2D and 3D figures	As expected (See Fig. 6, 7, 8)	Pass
TF3b	Test the 'Between Analysis' with unknown words	<ol style="list-style-type: none"> 1. Go to site 127.0.0.1:5200 or 127.0.0.1:5200/weds 2. Click 'Between_Analysis' 3. Enter Keyword 4. Enter the top-k number, the step-k number and click 'Find_Between' 	'6y3ear', 'interesting'	Show rrrors list in Terminal	As expected (See Fig. 9)	Pass

```

Embed — python3 flask_web.py — python3 — Python • Python flask_web.py — 75x18
$ python3 flask_web.py
* Serving Flask app "flask_web" (lazy loading)
* Environment: production
  WARNING: Do not use the development server in a production environment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5200/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 273-647-310
127.0.0.1 - - [19/Aug/2018 20:55:24] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [19/Aug/2018 20:55:24] "GET /static/bootstrap.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Aug/2018 20:55:24] "GET /static/jumbotron-narrow.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Aug/2018 20:57:24] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [19/Aug/2018 21:03:31] "GET / HTTP/1.1" 200 -

```

Fig. 1 Result for TF1

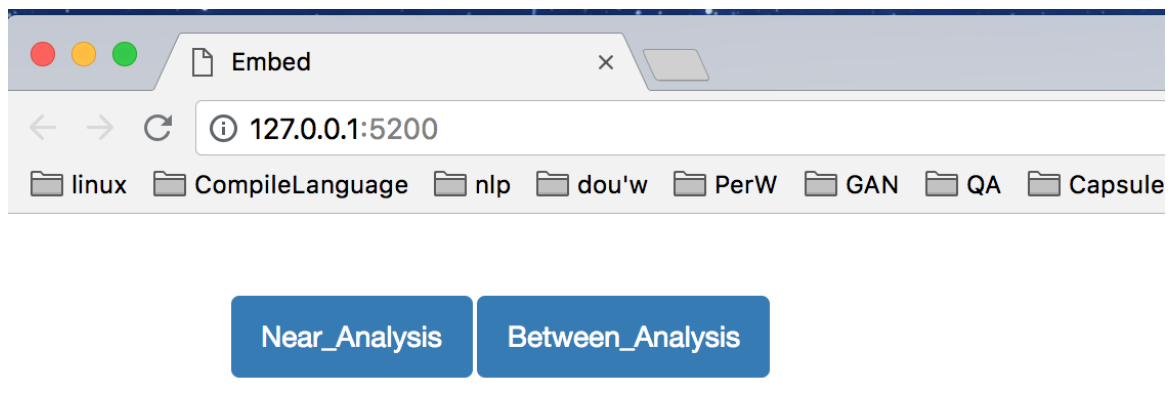


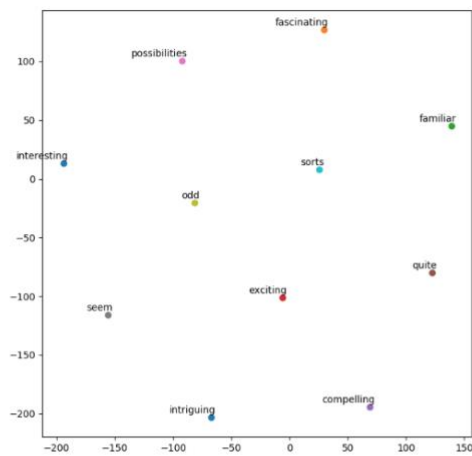
Fig. 2 Result for TF1

Near_Analysis			Between_Analysis
Input Details			
Keyword: interesting			
Top-K words: 10			
Similar Words Details			
4	compelling	0.8238800168037415	
5	quite	0.8146845102310181	
6	possibilities	0.8102021217346191	
7	seem	0.7910114526748657	
8	odd	0.7901343107223511	

Fig. 3 Result for TF2a

TSNE Graphs

2D:



3D:

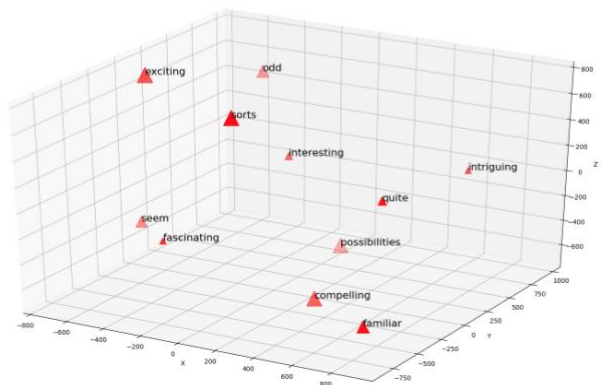


Fig. 4 Result for TF2a

builtins.KeyError

KeyError: "word 'iabcdfead' not in vocabulary"

Traceback (most recent call last)

```
File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 2309, in __call__
    return self.wsgi_app(environ, start_response)
File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 2295, in wsgi_app
    response = self.handle_exception(e)
File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 1741, in handle_exception
    reraise(exc_type, exc_value, tb)
File "/usr/local/lib/python3.7/site-packages/flask/_compat.py", line 35, in reraise
    raise value
```

Fig. 5 Result for TF2b

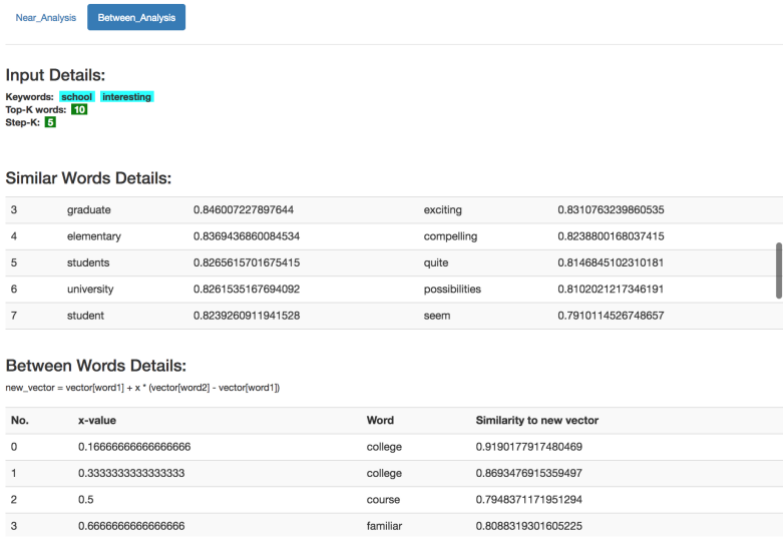


Fig. 6 Result for TF3a

TSNE Graphs

2D:

Fig for Near Words:

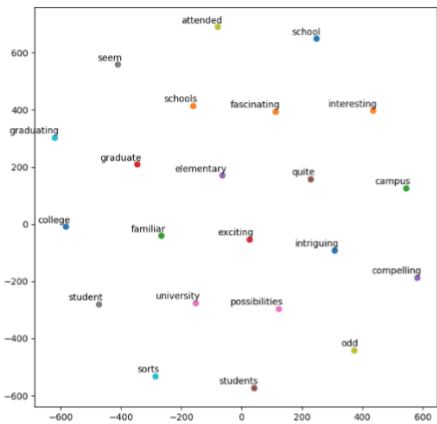


Fig for Between Words:

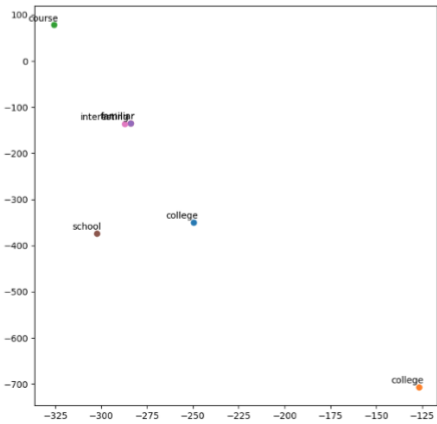


Fig. 7 Result for TF3a

Fig for Near Words:

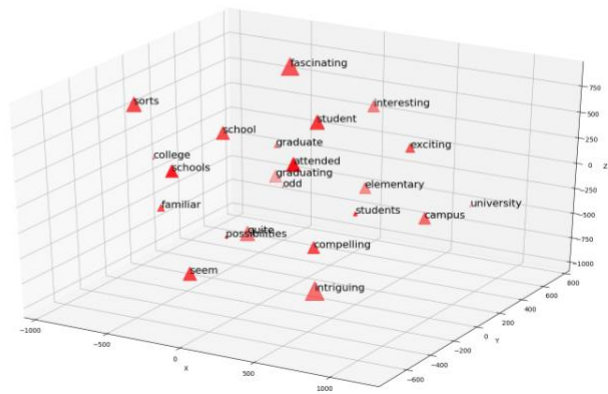


Fig for Between Words:

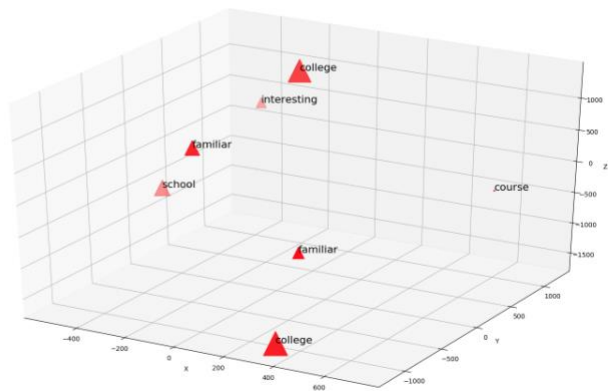


Fig. 8 Result for TF3a

builtins.KeyError

KeyError: "word '6y3ear' not in vocabulary"

Traceback (most recent call last)

File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 2309, in __call__

```
    return self.wsgi_app(environ, start_response)
```

File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 2295, in wsgi_app

```
    response = self.handle_exception(e)
```

File "/usr/local/lib/python3.7/site-packages/flask/app.py", line 1741, in handle_exception

```
    reraise(exc_type, exc_value, tb)
```

File "/usr/local/lib/python3.7/site-packages/flask/_compat.py", line 35, in reraise

```
    raise value
```

Fig. 9 Result for TF3b