38-wordseye

April 29, 2016

1 Wordseye

- converts natural language into rendered 3D scenes
- can access server with simple html protocol
- using 'requests' instead of 'urllib'
- gallery of pictures

```
In [3]: import requests
        from IPython.display import Image

        def login():
            # sleazy but easy
            global cookie
            # put POST data in a dict
            d = dict()
            d['username']='lstead'
            d['password']= 'foobarfoo'
            d['apt'] = 't'
            url = 'https://www.wordseye.com/login'
            # has to be a http POST request, not a GET
            r = requests.post(url, data=d)
            # permission cookie comes back in the headers - pull it out
            cookie = r.cookies['wordseye']
            return cookie

        def depict(text):
            url = 'http://www.wordseye.com/workspace'
            cookies = dict()
            cookies['wordseye'] = cookie
            params = dict()
            params['new'] = 't'
            # reset workspace
            requests.get(url, params=params, cookies=cookies)

            params = dict()
            params['api'] = 't'
            params['depict'] = 't'
            params['ptext'] = text
            params['provide_sample_scenes'] = 'f'
            # render scene
            get = requests.get(url, params=params, cookies=cookies)
            return get

In [4]: login()
```

```
Out[4]: 'determiner-3004-7b8909e6-e3ed-4afc-a098-943087347fe0#determiner'

In [5]: get = depict('tiger and dog')
        list(get)
```

```
Out[5]: [b'{"url":"https://images.wordseye.com/display-images/3004/3621609048-u3004-G2163.jpg?dummy=367(
         b'nitial_scene":null,"scene_id":null,"scene_name":null,"tips_visible":null,"blurb":null,"text":"
         b'ications":null,"template":null,"camera_strip":{"url":"https://images.wordseye.com/display-ima
         b'ip.jpg?dummy=3670947419-G4029","x_axis_rot_incr":6.0,"y_axis_rot_incr":10.28,"joint_xy?":null,
         b'layw":312,"cell_displayh":224,"full_image_width":624,"full_image_height":451,"num_x_axis_rot":1
         b's":19,"num_y_trans":15,"num_zoom":15,"cell_config":"full_circle_small"},"object_mappings":[{"wc
         b'L_GROUND","aimable":null,"changed_p":true,"index":0,"node_type":"META-3D-OBJECT","best_word":"
         b'"META-3D-OBJECT","size":4000.0,"parts":["outside","top","bottom"],"src":"https://images.words
         b'cts/obj-gn1022.jpg"},{"word":"dog","node_id":"OBJ-ROUGH_COLLIE-HM0138","aimable":true,"change
         b'TA-3D-OBJECT","best_word":"collie","words":["collie","dog"],"type":"META-3D-OBJECT","size":3.
         b'mages.wordseye.com/visual-dictionary-data/objects/obj-hm0138.jpg"},{"word":"tiger","node_id":
         b'changed_p":true,"index":4,"node_type":"META-3D-OBJECT","best_word":"tiger","words":["tiger","
         b'size":6.0,"parts":["body"],"src":"https://images.wordseye.com/visual-dictionary-data/objects/
         b're","node_id":"IMG-BLS0000","aimable":null,"changed_p":true,"index":5,"node_type":"META-IMAGE
         b'ud","sky","firmament","texture","texture map","picture","sky texture","image"],"type":"META-1
         b'e.com/visual-dictionary-data/images/blender-skies/img-bls0000.jpg"}],"objects_changed":true,'
         b'ye.com/gallery/tags/examples?api=t","show_instructions":null,"announcement":null,"sample_scen
```

```
In [6]: # parse JSON into a dict

        #get = depict('tiger and dog')
        get.json()
```

```
Out[6]: {'announcement': None,
         'blurb': None,
         'camera_strip': {'cell_config': 'full_circle_small',
          'cell_displayh': 224,
          'cell_displayw': 312,
          'cellh': 112,
          'cellw': 156,
          'full_image_height': 451,
          'full_image_width': 624,
          'joint_xy?': None,
          'num_x_axis_rot': 11,
          'num_x_trans': 19,
          'num_y_axis_rot': 34,
          'num_y_trans': 15,
          'num_zoom': 15,
          'url': 'https://images.wordseye.com/display-images/3004/3621609048-u3004-G2163-strip.jpg?dumm
          'x_axis_rot_incr': 6.0,
          'y_axis_rot_incr': 10.28},
         'empty_scene': None,
         'error': None,
         'initial_scene': None,
         'notifications': None,
         'object_mappings': [{'aimable': None,
           'best_word': 'ground',
           'changed_p': True,
           'index': 0,
           'node_id': 'OBJ-GLOBAL_GROUND',
```

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```
 'node_type': 'META-3D-OBJECT',
 'parts': ['outside', 'top', 'bottom'],
 'size': 4000.0,
 'src': 'https://images.wordseye.com/visual-dictionary-data/objects/obj-gn1022.jpg',
 'type': 'META-3D-OBJECT',
 'word': 'ground',
 'words': ['ground']},
{'aimable': True,
 'best_word': 'collie',
 'changed_p': True,
 'index': 3,
 'node_id': 'OBJ-ROUGH_COLLIE-HM0138',
 'node_type': 'META-3D-OBJECT',
 'parts': ['body'],
 'size': 3.0,
 'src': 'https://images.wordseye.com/visual-dictionary-data/objects/obj-hm0138.jpg',
 'type': 'META-3D-OBJECT',
 'word': 'dog',
 'words': ['collie', 'dog']},
{'aimable': True,
 'best_word': 'tiger',
 'changed_p': True,
 'index': 4,
 'node_id': 'OBJ-TIGER-HM0161',
 'node_type': 'META-3D-OBJECT',
 'parts': ['body'],
 'size': 6.0,
 'src': 'https://images.wordseye.com/visual-dictionary-data/objects/obj-hm0161.jpg',
 'type': 'META-3D-OBJECT',
 'word': 'tiger',
 'words': ['tiger', 'big cat']},
{'aimable': None,
 'best_word': 'cloud',
 'changed_p': True,
 'index': 5,
 'node_id': 'IMG-BLS0000',
 'node_type': 'META-IMAGE',
 'src': 'https://images.wordseye.com/visual-dictionary-data/images/blender-skies/img-bls0000.
 'type': 'META-IMAGE',
 'word': 'sky texture',
 'words': ['cloud',
  'sky',
  'firmament',
  'texture',
  'texture map',
  'picture',
  'sky texture',
  'image']}],
'objects_changed': True,
'sample_scenes': None,
'scene_id': None,
'scene_name': None,
'scene_tray_url': 'https://www.wordseye.com/gallery/tags/examples?api=t',
'show_instructions': None,
```

```
                 'template': None,
                 'text': 'tiger and dog',
                 'tips_visible': None,
                 'url': 'https://images.wordseye.com/display-images/3004/3621609048-u3004-G2163.jpg?dummy=367094
```

In [7]: *# pull url out, but junk at end*

```python
def dd(text):
    global pic, pic2
    get = depict(text)
    pic = get.json()['url']
    return pic

dd('tiger and dog')
```

Out[7]: 'https://images.wordseye.com/display-images/3004/3621609048-u3004-G2163.jpg?dummy=3670947459-G4(

In [8]: *# this should do it*

```python
def dd2(text):
    global pic, pic2
    get = depict(text)
    pic = get.json()['url']
    pic2 = pic.split('?')
    # finally got something to display
    return Image(pic2[0])
```

In [9]: dd2('tiger and dog')

Out[9]:

In [10]: dd2('orange sphere on matisse cube')

Out[10]:

In [ ]: