

Behaviour Risk Model Algorithm (BRMA) Api

Design Doc

Input: (string)

URL: <http://brma.herokuapp.com/api/v1>

GET/POST parameter: `gps_data`

desc: set of lines where each line have exactly three fields latitude, longitude and minutes spent at that location.

sample:

```
{'location':  
  [  
    {'duration': 120, 'latitude': 50.73858, 'longitude': 7.07873},  
    {'duration': 120, 'latitude': 50.737204, 'longitude': 7.102983},  
    {'duration': 120, 'latitude': 26.13, 'longitude': -80.32}  
  ]  
}
```

Output: (json)

desc: JSON consisting of:

a. **brma_score**: the BRMA score ranging from 0 to 150

b. **nimby_score**: ranging from 0 to 50

c. **yimby_score**: ranging from 0 to 50

d. **env_score**: JSON consisting of:

* **aqi**: air quality score ranging from 0 to 12.5

* **crime_score**: ranging from 0 to 12.5

sample: `{"brma_score": 69.25, "nimby_score": 0, "yimby_score": 50, "environment_score": {"normalized_environment_score": 19.25, "crime_rate": 6.375, "air_quality_index": 3.25}}`

ProjectVision Error Codes:

100: 'invalid json'
101: 'invalid value'
102: 'missing value'

Code Description:

repository: <https://github.com/projectvision/healthapp-api2>

command to run the api: `python web_api.py`

modules:

`web_api`: handler for get/post requests

`scorer`: computes nimby and yimby scores

`env_scores`: computes both the environment scores (aqi and crime)

`crime_rate_api`: interface for provide crime rates for a given lat/long

`config`: the yaml format file of yimby and nimby locations

`requirements`: list of required python libraries

`templates/`: containing the html

`Procfile`: heroku specific file for running the app

`crime_rate.cc`: utility script for parsing the crime date (not production relevant)

test_api: simple python script for demoing api usage.