



# Lisbon Tourism Web App

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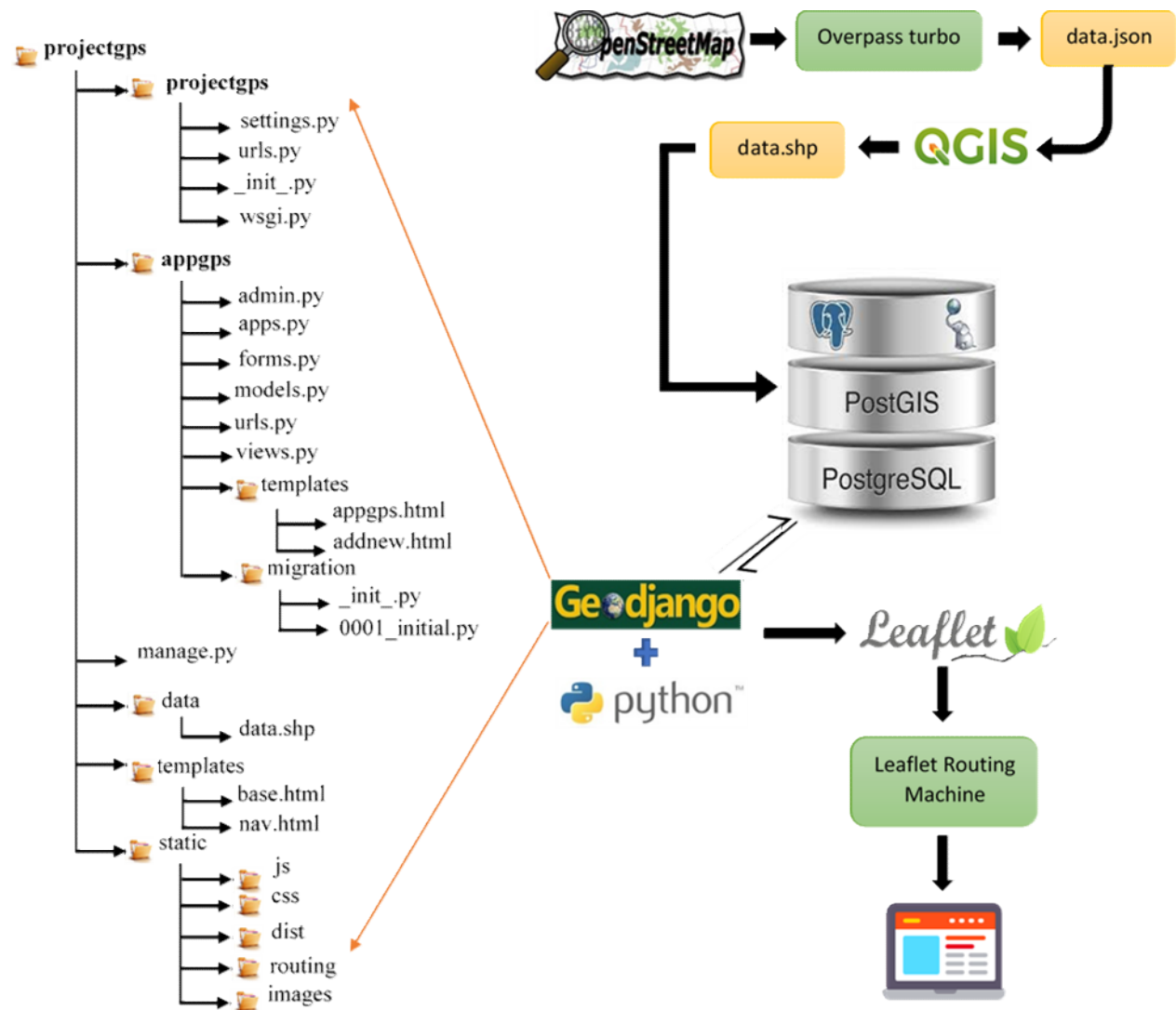








# Methodology




```
settings.py x
31
32 INSTALLED_APPS = [
33     'django.contrib.admin',
34     'django.contrib.auth',
35     'django.contrib.contenttypes',
36     'django.contrib.sessions',
37     'django.contrib.messages',
38     'django.contrib.staticfiles',
39     'django.contrib.gis',
40     'appgps',
41     'crispy_forms',
42     'leaflet',
43 ]
44
45 MIDDLEWARE = [
46     'django.middleware.security.SecurityMiddleware',
47     'django.contrib.sessions.middleware.SessionMiddleware',
48     'django.middleware.common.CommonMiddleware',
49     'django.middleware.csrf.CsrfViewMiddleware',
50     'django.contrib.auth.middleware.AuthenticationMiddleware',
51     'django.contrib.messages.middleware.MessageMiddleware',
52     'django.middleware.clickjacking.XFrameOptionsMiddleware',
53 ]
54
55 ROOT_URLCONF = 'projectgps.urls'
56
57 TEMPLATES = [
58     {
59         'BACKEND': 'django.template.backends.django',
60         'DIRS': [os.path.join(BASE_DIR, 'templates')],
61         'APP_DIRS': True,
62         'OPTIONS': {
63             'context_processors': [
64                 'django.template.context_processors.debug',
65                 'django.template.context_processors.request',
66                 'django.contrib.auth.context_processors.login_required',
67                 'django.contrib.messages.context_processors.messages',
68             ],
69         },
70     },
71 ]
```

settings.py

- Build paths inside the project
- Include necessary apps
- Path setting for Templates
- Database connection
- Language and time settings
- Password settings
- Path for static files

```
models.py x
1 from django.db import models
2 from django.contrib.gis.db import models
3
4 # Database table model
5
6 class Attraction(models.Model):
7     gid = models.IntegerField(default=10)
8     Name = models.CharField(max_length=100)
9     Address = models.TextField()
10    Decription = models.TextField(blank=True, null=True)
11    Opening_hours = models.TextField(blank=True, null=True)
12    Website = models.URLField(blank=True, null=True)
13    Tickets = models.TextField(blank=True, null=True)
14    Latitude = models.FloatField()
15    Longitude = models.FloatField()
16
17    # GeoDjango-specific: a geometry field (PointField)
18    Geometry = models.PointField()
19
20    # Returns the string representation of the model.
21    def __str__(self):
22        return self.Name
```

model.py

Data Output												Explain	Messages	Notifications	Query History	Geometry Viewer
	<div><div>Id</div><div>[PK] integer</div></div>	<div><div>Gid</div><div>integer</div></div>	<div><div>Name</div><div>character varying (100)</div></div>	<div><div>Address</div><div>text</div></div>	<div><div>Description</div><div>text</div></div>	<div><div>Opening_hours</div><div>text</div></div>	<div><div>Website</div><div>character varying (200)</div></div>	<div><div>Tickets</div><div>text</div></div>	<div><div>Latitude</div><div>double precision</div></div>	<div><div>Longitude</div><div>double precision</div></div>	<div><div>Geometry</div><div>geometry</div></div>					
1	27	27	Geomonumento da Quinta...	Rua Amílcar Cabral, Lisboa		24/7	http://www.cm-lisboa.pt/e...		38.762539	-9.151365	0101000020E61...					
2	26	26	Fonte Monumental da Ala...	Alameda Dom Afonso Henri...		24/7	http://www.cm-lisboa.pt/e...		38.737313	-9.130431	0101000020E61...					
3	25	25	Oceanário de Lisboa	Parque das Nações, 1990-22...		Mo-Su 10:00-19:0...	http://www.oceanario.pt	https://...	38.763485	-9.093699	0101000020E61...					
4	24	24	Torre da Paroquial	Rua da Torre, Lisboa		24/7	https://olharescruzados.bl...		38.708146	-9.196439	0101000020E61...					
5	22	22	Capela de São Jerónimo	Praça de Itália, Lisboa			http://www.mosteirojeroni...		38.701357	-9.213714	0101000020E61...					
6	20	20	Planetário Calouste Gulbe...	Praça do Império, 1400-206 ...		From tuesday to F...	https://ccm.marinha.pt/pt/...	https://c...	38.698143	-9.208902	0101000020E61...					
7	32	32	Chafariz no Largo do Carmo	Largo do Carmo 4, 1200-092 ...		Open 24 hours	http://www.monumentos....		38.711935	-9.140838	0101000020E61...					
8	31	31	Fonte do Neptuno	Largo Dona Estefânia, 1000-...		Winter: 5:30 p.m. t...	http://www.cm-lisboa.pt/e...		38.731665	-9.140871	0101000020E61...					
9	30	30	Miradouro de São Pedro d...	R. de São Pedro de Alcântara...		24/7	http://www.cm-lisboa.pt/e...		38.715277	-9.144245	0101000020E61...					
10	29	29	Chafariz de São Paulo	Praça de São Paulo, 1200-42...		24/7	http://www.cm-lisboa.pt/e...		38.707745	-9.144782	0101000020E61...					
11	28	28	Chafariz do Intendente ou ...	Rua da Palma, Fountain, Lisb...		24/7	http://www.cm-lisboa.pt/e...		38.719924	-9.135738	0101000020E61...					
12	19	19	Padrão dos Descobrimentos	Av. Brasília 1400-038 Lisboa		March to Septemb...	http://www.padraodosdes...	http://w...	38.693599	-9.205712	0101000020E61...					
13	16	16	Cinemateca Portuguesa - ...	R. Barata Salgueiro 39, 1250-...			http://www.cinemateca.pt/...	Ticket O...	38.720868	-9.148717	0101000020F61...					

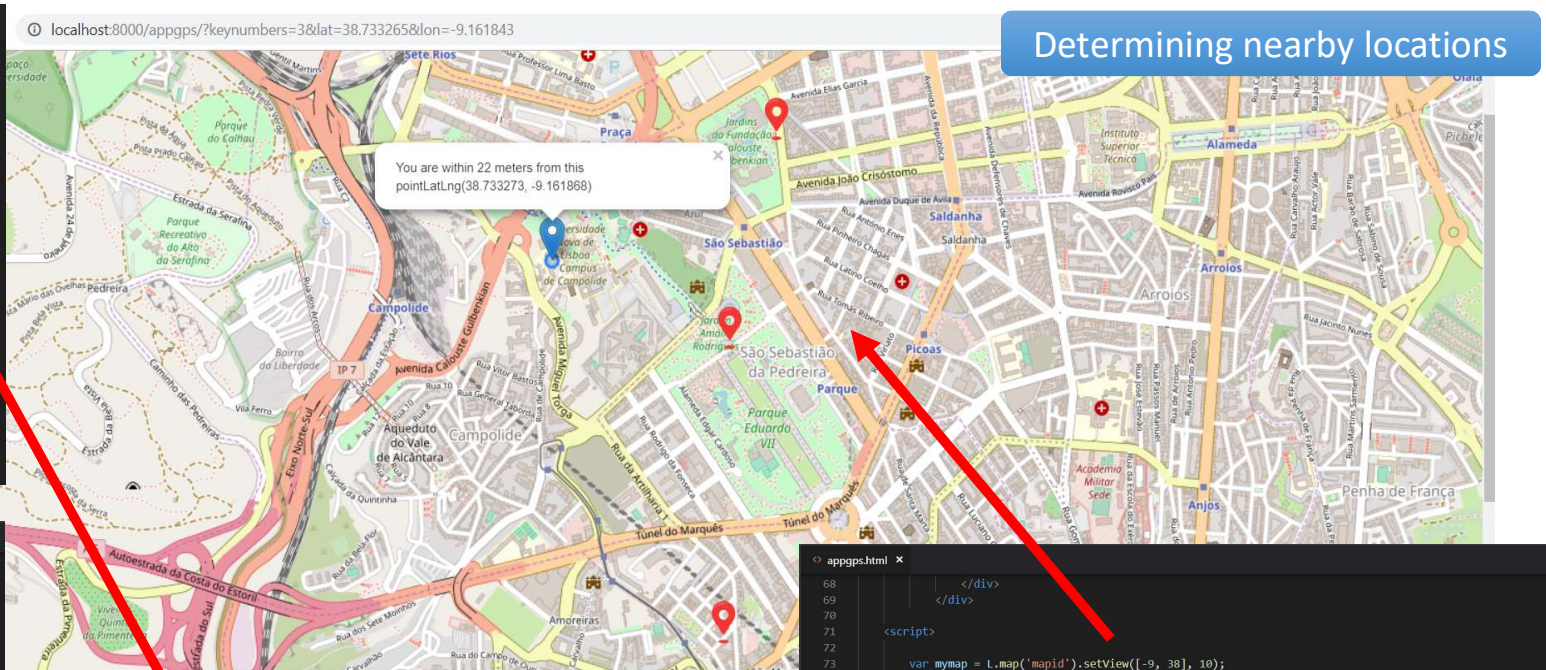


```
forms.py
1 from django import forms
2 from .models import Attraction
3
4 # Obtaining number of places to visit and location from user
5 class QueryForm(forms.Form):
6
7     keynumbers = forms.IntegerField(
8         required=False,
9         label='',
10         widget=forms.NumberInput(
11             attrs={
12                 'class': 'form-control',
13                 'placeholder': ' '
14             })
15     )
16
17     lat = forms.FloatField(
18         label='',
19         widget=forms.TextInput(
20             attrs={
21                 'class': 'form-control',
22                 'id': 'id_lat',
23             })
24     )
```

forms.py

```
views.py
13 def all_appgps(request):
14     """
15     Obtaining parameter to limit number of travel locations
16     """
17
18     appgps = Attraction.objects.all()
19     form = QueryForm(request.GET or None)
20     a = request.GET.get('keynumbers')
21     if a is None:
22         x = 94
23     else:
24         x = int(a)
25
26     b = request.GET.get('lat')
27     if b is None:
28         latitude = 38
29     else:
30         latitude = float(b)
31
32     c = request.GET.get('lon')
33     if c is None:
34         longitude = -9
35     else:
36         longitude = float(c)
37
38     # Determining nearby locations.
39
40     user_location = Point(longitude, latitude, srid=4326)
41     appgps = Attraction.objects.annotate(distance=Distance('Geometry', user_location)
42     ).order_by('distance')[0:x]
43
44     map_appgps = [{'loc': [float(attraction.latitude), float(attraction.longitude)],
45         'Name': attraction.Name,} for attraction in appgps]
46
47     context = {
48         'appgps': appgps,
49         'map_appgps': mark_safe(escapejs(json.dumps(map_appgps))),
50         'form': form
51     }
52     return render(request, 'appgps/appgps.html', context)
```

views.py



Determining nearby locations

How many places do you want to visit ?

Your Location

```
appgps.html
68 </div>
69
70 </div>
71
72 <script>
73     var mymap = L.map('mapid').setView([-9, 38], 10);
74
75     L.tileLayer('https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {
76         attribution: '&copy; <a href="https://www.openstreetmap.org/copyright">OpenStreetMap</a> contributors'
77     }).addTo(mymap);
78
79     // var markers = L.markerClusterGroup();
80
81     var attractionIcon = L.icon({
82         iconUrl: '/static/images/pin2.png',
83         iconSize: [80, 80],
84         iconAnchor: [17, 35],
85         popupAnchor: [0, -30]
86     });
87
88     // var markersLayer = new L.LayerGroup();
89
90     var markersLayer = L.markerClusterGroup();
91
92     mymap.addLayer(markersLayer);
93
94     function populateMap(data){
95         for(i in data){
96             var Name = data[i].Name,
97                 loc = data[i].loc,
98                 marker = new L.Marker(new L.Latlng(loc), {Name: Name, icon: attractionIcon});
99             marker.bindPopup('<cp><a> ' + Name + '</a></p>');
100             markersLayer.addLayer(marker);
101         }
102     }
103
104 }
105
106
```

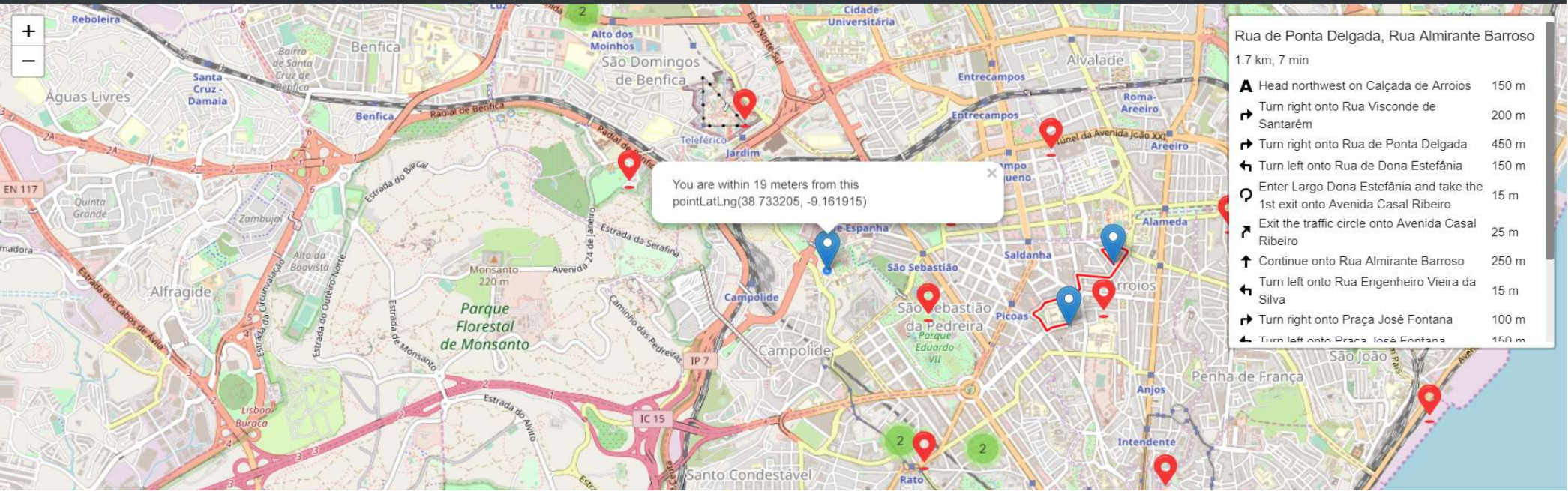
appgps.html



# Results - Web App

Tourist Attractions in Lisbon 🏖️ 🌴 🏡 🏰

Add



How many places do you want to visit ?

Submit

Your Location

Show 10 entries


Search:

Name	Address	Opening hours	Website	Tickets
Museu Calouste Gulbenkian	Avenida de Berna 45A, 1067-001 Lisboa	Mon-Sun 10:00-18:00, Closed Tue and on 1 January, Easter Sunday, 1 May, 24 and 25 December.	<a href="https://gulbenkian.pt/museu/">https://gulbenkian.pt/museu/</a>	<a href="https://gulbenkian.pt/museu/en/tickets/">https://gulbenkian.pt/museu/en/tickets/</a>
Museu Arpad Szenes - Vieira da Silva	Praça das Amoreiras, 56, 1250-020 Lisboa	Tu-Su 10:00-18:00; PH off	<a href="http://fasvs.pt">http://fasvs.pt</a>	<a href="http://fasvs.pt/en/contactos/horarios">http://fasvs.pt/en/contactos/horarios</a>
Jardim Amália Rodrigues	Alameda Cardeal Cerejeira, 1070-051 Lisboa	Open 24 hours	<a href="http://www.cm-lisboa.pt/equipamentos/equipamento/info/jardim-amalia-rodrigues">http://www.cm-lisboa.pt/equipamentos/equipamento/info/jardim-amalia-rodrigues</a>	Free

Showing 1 to 3 of 3 entries

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Attractions



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NOVA IMS Mo...



Facebook



Google Maps



My Drive



Django site ad...



GeoDjango Tut...



unread)



Add shortcut







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