

Python Project – COVID-19

Spread Analysis with Flask

app.py:

```
def find_top_confirmed(n = 15):

    import pandas as pd

    corona_df=pd.read_csv("dataset3.csv")

    by_country = corona_df.groupby('Province_State').sum()[['Confirmed', 'Deaths',
'Recovered', 'Active']]

    cdf = by_country.nlargest(n, 'Confirmed')[['Confirmed']]

    return cdf

cdf=find_top_confirmed()

pairs=[(province_state,confirmed) for province_state,confirmed in
zip(cdf.index,cdf['Confirmed'])]

import folium

import pandas as pd

corona_df = pd.read_csv("dataset3.csv")

corona_df=corona_df[['Lat', 'Long_', 'Confirmed']]

corona_df=corona_df.dropna()

m=folium.Map(location=[34.223334,-82.461707],

               tiles='Stamen toner',

               zoom_start=8)
```

```

def circle_maker(x):

    folium.Circle(location=[x[0],x[1]],

                    radius=float(x[2]),

                    color="red",

                    popup='confirmed cases:{}'.format(x[2])).add_to(m)

corona_df.apply(lambda x:circle_maker(x),axis=1)

html_map=m._repr_html_()

from flask import Flask,render_template

app=Flask(__name__)

@app.route('/')

def home():

    return render_template("home.html",table=cdf, cmap=html_map,pairs=pairs)

if __name__=="__main__":

    app.run(debug=True)

```

base.html:

```

<head>

<link

    rel="stylesheet"

href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"

integrity="sha384-9aIt2nRpC12Uk9gS9baDl411NQApFmC26EwAOH8WgZl5MYxxFfc+NcPb1dKGj
7Sk"

```

```

        crossorigin="anonymous"

    />

    <link

rel="stylesheet"

type="text/css"

href="{{ url_for('static',filename='style.css')}}"

    />

</head>

{% block content %} {% endblock %}

```

home.html:

```

{% extends "base.html" %} {% block content %}

<div class="container">

    <h1>COVID-19 Spread Analysis</h1>

    <div class="row">

        <div class="col-4">

            <h5><font color="red">Top 15 States</font></h5>

            <p>This is the province state wise covid-19 data upto 20 july 2020.</p>

            <table class="table-responsive-sm table-dark">

                <thead>

                    <tr>

```

```

        <th scope="col">Province State</th>

        <th scope="col">Confirmed</tr>

        </tr>

    </thead>

    <tbody>

    {% for pair in pairs %}

    <tr>

    <td>{{ pair[0] }}</td>

    <td>{{ pair[1] }}</td>

    </tr>

    {% endfor %}

    </tbody>

</table></div>

<div class="col-8">

    <h5><font color="firebrick">world map of corona cases. The bigger the
circle, bigger is the impace of corona virus in that province
state.</font></h5>

    <p>using the same data we provided an updated map that contains</p>

    {{ cmap|safe }}</div>

</div>

</div>

{% endblock %}

```

style.css:

```
body {
```

```
  background-color: black;
```

```
  color: white;
```

```
}
```

```
h1,
```

```
td,
```

```
tr {
```

```
  color: white;
```