ft_like_analysis_india

April 17, 2020

0.0.1 Indian State level analysis like https://www.ft.com/coronavirus-latest

APIs available:

https://api.covid19india.org/data.json

https://api.covid19india.org/state_district_wise.json

https://api.covid19india.org/states_daily.json

https://api.covid19india.org/state_test_data.json

Imports

[1]:
```
import requests
import json
import plotly.graph_objects as go
```

Get Data

[2]:
```
js = json.loads(requests.get("https://api.covid19india.org/states_daily.json").
↪text)['states_daily']
```

Calculate Statewise Daily Deaths with Coronavirus (7-day rolling average)

[47]:
```
def get_ravg(status, cutoff):
    def num(s):
        try:
            return int(s)
        except ValueError:
            return 0
    dd = {key: list() for key in js[0].keys() if key not in ['date', 'status',␣
↪'tt']}
    for row in js:
        if row['status'] == status:
            for key in dd.keys():
                dd[key].append(row[key])
    def roll_avg(ll):
        if len(ll)>=7:
            return round(sum(ll[-7:]) / 7)
        return round(sum(ll) / len(ll))
```

```
    state_flags = dict()
    state_dd_list = dict()
    state_dd_ravg = dict()
    for state in dd.keys():
        state_flags[state] = False
        for state_dd in dd[state]:
            if state_flags[state]:
                state_dd_list[state].append(num(state_dd))
                state_dd_ravg[state].append(roll_avg(state_dd_list[state]))
            elif num(state_dd) >= cutoff:
                state_flags[state] = True
                state_dd_list[state] = [num(state_dd)]
                state_dd_ravg[state] = [num(state_dd)]
    fig = go.Figure()
    annotations = list()
    for key in state_dd_ravg.keys():
        fig.add_trace(go.Scatter(x=list(range(1, (len(state_dd_ravg[key])+1))),␣
↪y=state_dd_ravg[key],
                                 mode='lines',
                                 name=key))
        ann = dict(x=len(state_dd_ravg[key]),
            y=state_dd_ravg[key][-1],
            xref="x",
            yref="y",
            text=key,
            showarrow=False,
            arrowhead=1,
            ax=0,
            ay=-10)
        annotations.append(dict(ann))

        fig.update_layout(showlegend=False, annotations=annotations)

    return fig
```

Plots

[48]:
```
fig = get_ravg('Deceased', 3)
fig.update_layout(title='Indian State-wise Daily deaths with coronavirus (as of␣
↪17th April, 2020)',
                  xaxis_title='Days since 3 daily deaths first recorded',
                  yaxis_title='Daily Deaths (7-day rolling avg)')

fig.show()
```

[49]:
```
fig = get_ravg('Confirmed', 30)
fig.update_layout(title='Indian State-wise daily confirmed with coronavirus (as␣
 ↪of 17th April, 2020)',
                  xaxis_title='Days since 30 daily confirmed first recorded',
                  yaxis_title='Daily confirmed cases (7-day rolling avg)')

fig.show()
```