Covid19India

April 16, 2020

1 Covid19India - EDA

Data Description The dataset consists of the information about Covid19India cases taken from Covid19India API.

Below is a table showing names of all the columns and their description.

Attributes	Dtype
agebracket	object
backupnotes	object
contractedfromwhichpatientsuspected	object
currentstatus	object
dateannounced	object
detectedcity	object
detecteddistrict	object
detectedstate	object
estimatedonsetdate	object
gender	object
nationality	object
notes	object
patientnumber	object
source1	object
source2	object
source3	object
statecode	object
statepatientnumber	object
statuschangedate	object
typeoftransmission	object

1.1 Import Libraries

[3]:
```
import os
from requests import request
import urllib.request
import json
from pandas.io.json import json_normalize
```

```
import numpy as np
import pandas as pd
import pandas_profiling
import seaborn as sns
import matplotlib.pyplot as plt
import plotly
import plotly.graph_objects as go
import plotly.express as px

%matplotlib inline
```

2 Read Data from Covid19India API

[4]:
```
response=request(url='https://api.covid19india.org/raw_data.json', method='get')
elevations = response.json()
rec = elevations['raw_data']
```

[5]:
```
df = json_normalize(rec)
```

[6]:
```
df.head()
```

[6]:
```
  agebracket                                backupnotes  \
0         20                          Student from Wuhan
1                                     Student from Wuhan
2                                     Student from Wuhan
3         45         Travel history to Italy and Austria
4         24  Travel history to Dubai, Singapore contact

  contractedfromwhichpatientsuspected currentstatus dateannounced  \
0                                          Recovered    30/01/2020
1                                          Recovered    02/02/2020
2                                          Recovered    03/02/2020
3                                          Recovered    02/03/2020
4                                          Recovered    02/03/2020

              detectedcity detecteddistrict detectedstate estimatedonsetdate  \
0                 Thrissur         Thrissur        Kerala
1                Alappuzha        Alappuzha        Kerala
2                Kasaragod        Kasaragod        Kerala
3  East Delhi (Mayur Vihar)       East Delhi         Delhi
4                Hyderabad        Hyderabad     Telangana

  gender nationality                                          notes  \
0      F       India                       Travelled from Wuhan
1              India                       Travelled from Wuhan
2              India                       Travelled from Wuhan
```

```
3      M       India                        Travelled from Austria, Italy
4      M       India  Travelled from Dubai to Bangalore on 20th Feb,...

  patientnumber                                             source1  \
0             1  https://twitter.com/vijayanpinarayi/status/122...
1             2  https://www.indiatoday.in/india/story/kerala-r...
2             3  https://www.indiatoday.in/india/story/kerala-n...
3             4  https://www.indiatoday.in/india/story/not-a-ja...
4             5  https://www.deccanherald.com/national/south/qu...

                                            source2  \
0  https://weather.com/en-IN/india/news/news/2020...
1  https://weather.com/en-IN/india/news/news/2020...
2  https://twitter.com/ANI/status/122422148580539...
3  https://economictimes.indiatimes.com/news/poli...
4  https://www.indiatoday.in/india/story/coronavi...

                                            source3 statecode  \
0                                                           KL
1                                                           KL
2  https://weather.com/en-IN/india/news/news/2020...        KL
3                                                           DL
4  https://www.thehindu.com/news/national/coronav...        TG

  statepatientnumber statuschangedate typeoftransmission
0          KL-TS-P1       14/02/2020           Imported
1          KL-AL-P1       14/02/2020           Imported
2          KL-KS-P1       14/02/2020           Imported
3             DL-P1       15/03/2020           Imported
4             TS-P1       02/03/2020           Imported
```

[7]:
```
df.columns
```

[7]:
```
Index(['agebracket', 'backupnotes', 'contractedfromwhichpatientsuspected',
       'currentstatus', 'dateannounced', 'detectedcity', 'detecteddistrict',
       'detectedstate', 'estimatedonsetdate', 'gender', 'nationality', 'notes',
       'patientnumber', 'source1', 'source2', 'source3', 'statecode',
       'statepatientnumber', 'statuschangedate', 'typeoftransmission'],
      dtype='object')
```

[8]:
```
df.shape
```

[8]:
```
(13060, 20)
```

[9]:
```
data=df.copy()
data.head()
```

[9]:
```
  agebracket                              backupnotes  \
0         20                  Student from Wuhan
1                                     Student from Wuhan
```

```
2                                  Student from Wuhan
3         45         Travel history to Italy and Austria
4         24  Travel history to Dubai, Singapore contact

  contractedfromwhichpatientsuspected currentstatus dateannounced  \
0                                          Recovered    30/01/2020
1                                          Recovered    02/02/2020
2                                          Recovered    03/02/2020
3                                          Recovered    02/03/2020
4                                          Recovered    02/03/2020

              detectedcity detecteddistrict detectedstate estimatedonsetdate  \
0                 Thrissur         Thrissur        Kerala
1                Alappuzha        Alappuzha        Kerala
2                Kasaragod        Kasaragod        Kerala
3  East Delhi (Mayur Vihar)       East Delhi         Delhi
4                Hyderabad        Hyderabad     Telangana

  gender nationality                                              notes  \
0      F       India                                 Travelled from Wuhan
1              India                                 Travelled from Wuhan
2              India                                 Travelled from Wuhan
3      M       India                          Travelled from Austria, Italy
4      M       India  Travelled from Dubai to Bangalore on 20th Feb,...

  patientnumber                                             source1  \
0             1  https://twitter.com/vijayanpinarayi/status/122...
1             2  https://www.indiatoday.in/india/story/kerala-r...
2             3  https://www.indiatoday.in/india/story/kerala-n...
3             4  https://www.indiatoday.in/india/story/not-a-ja...
4             5  https://www.deccanherald.com/national/south/qu...

                                           source2  \
0  https://weather.com/en-IN/india/news/news/2020...
1  https://weather.com/en-IN/india/news/news/2020...
2  https://twitter.com/ANI/status/122422148580539...
3  https://economictimes.indiatimes.com/news/poli...
4  https://www.indiatoday.in/india/story/coronavi...

                                           source3 statecode  \
0                                                         KL
1                                                         KL
2  https://weather.com/en-IN/india/news/news/2020...      KL
3                                                         DL
4  https://www.thehindu.com/news/national/coronav...      TG

  statepatientnumber statuschangedate typeoftransmission
```

```
0          KL-TS-P1       14/02/2020          Imported
1          KL-AL-P1       14/02/2020          Imported
2          KL-KS-P1       14/02/2020          Imported
3             DL-P1       15/03/2020          Imported
4             TS-P1       02/03/2020          Imported
```

[10]:
```
profile = pandas_profiling.ProfileReport(df)
profile.to_file(output_file="covid19_data_before_preprocessing.html")
```

[11]:
```
#pandas_profiling.ProfileReport(df)
```

```
<IPython.core.display.HTML object>
```

[11]:

Observations - agebracket has a high cardinality: 86 distinct values - backupnotes has a high cardinality: 223 distinct values - contractedfromwhichpatientsuspected has a high cardinality: 144 distinct values - detectedcity has a high cardinality: 313 distinct values
- detecteddistrict has a high cardinality: 349 distinct values
- estimatedonsetdate has constant value as NULL NEEDS TO BE Rejected - notes has a high cardinality: 709 distinct values
- source1 has a high cardinality: 785 distinct values - source2 has a high cardinality: 338 distinct values - source3 has a high cardinality: 102 distinct values - statepatientnumber has a high cardinality: 1463 distinct values

[12]:
```
print("Data Shape : Rows = {} , Columns = {}".format(df.shape[0],df.shape[1]))
```

```
Data Shape : Rows = 13060 , Columns = 20
```

[13]:
```
print("Column Names are : \n", df.columns)
```

```
Column Names are :
 Index(['agebracket', 'backupnotes', 'contractedfromwhichpatientsuspected',
       'currentstatus', 'dateannounced', 'detectedcity', 'detecteddistrict',
       'detectedstate', 'estimatedonsetdate', 'gender', 'nationality', 'notes',
       'patientnumber', 'source1', 'source2', 'source3', 'statecode',
       'statepatientnumber', 'statuschangedate', 'typeoftransmission'],
      dtype='object')
```

[14]:
```
df.drop(['estimatedonsetdate', 'notes', 'contractedfromwhichpatientsuspected',␣
 ↪'source1', 'source2', 'source3', 'backupnotes' ], axis = 1, inplace = True)
df.sample(10)
```

[14]:
```
      agebracket currentstatus dateannounced      detectedcity  \
12603             Hospitalized    16/04/2020              MCGM
11166             Hospitalized    14/04/2020
7671              Hospitalized    11/04/2020
68                Hospitalized    11/03/2020  Pimpri-Chinchwad
```

```
558           23     Recovered    24/03/2020         Mangaluru
3245          43  Hospitalized    04/04/2020
2217              Hospitalized    02/04/2020
11645             Hospitalized    15/04/2020
10757             Hospitalized    14/04/2020
5825              Hospitalized    08/04/2020

       detecteddistrict detectedstate gender nationality patientnumber  \
12603            Mumbai   Maharashtra                           12604
11166         Vikarabad     Telangana                           11167
7671              Anand       Gujarat                            7672
68                 Pune   Maharashtra              India            69
558    Dakshina Kannada     Karnataka      M       India           559
3245   Dakshina Kannada     Karnataka      M       India          3246
2217          Kozhikode        Kerala                            2218
11645                     Maharashtra                           11646
10757            Jaipur     Rajasthan                           10758
5825                           Delhi                            5826

      statecode statepatientnumber statuschangedate typeoftransmission
12603        MH                          16/04/2020
11166        TG                          14/04/2020
7671         GJ                          11/04/2020
68           MH                          11/03/2020           Imported
558          KA             KA-P41       07/04/2020           Imported
3245         KA            KA-P143       04/04/2020              Local
2217         KL                          02/04/2020
11645        MH                          15/04/2020
10757        RJ                          14/04/2020
5825         DL                          08/04/2020
```

[15]:
```
df['agebracket'] = pd.to_numeric(df['agebracket'], errors='coerce')
df['agebracket'] = df['agebracket'].astype('float')
#df['patientnumber'] = df['patientnumber'].astype('float')
```

[16]:
```
df['statuschangedate'] = pd.to_datetime(df['statuschangedate'])
df['dateannounced'] = pd.to_datetime(df['dateannounced'])

df['durationOfAnyStatus'] = df['statuschangedate'] - df['dateannounced']
df['durationOfAnyStatus'] = df['durationOfAnyStatus'].dt.days

df['statuschangedate'] = df['statuschangedate'].dt.strftime('%Y-%m-%d')
df['dateannounced'] = df['dateannounced'].dt.strftime('%Y-%m-%d')
```

[17]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 13060 entries, 0 to 13059
Data columns (total 14 columns):
```

```
agebracket             1542 non-null float64
currentstatus          13060 non-null object
dateannounced          13060 non-null object
detectedcity           13060 non-null object
detecteddistrict       13060 non-null object
detectedstate          13060 non-null object
gender                 13060 non-null object
nationality            13060 non-null object
patientnumber          13060 non-null object
statecode              13060 non-null object
statepatientnumber     13060 non-null object
statuschangedate       13060 non-null object
typeoftransmission     13060 non-null object
durationOfAnyStatus    12689 non-null float64
dtypes: float64(2), object(12)
memory usage: 1.4+ MB
```

[18]:
```
df.sample(10)
```

[18]:

	agebracket	currentstatus	dateannounced	detectedcity	detecteddistrict	detectedstate	gender	nationality	patientnumber	statecode	statepatientnumber	statuschangedate	typeoftransmission
9356	NaN	Hospitalized	2020-04-13	Vasai Virar	Palghar	Maharashtra			9357	MH		2020-04-13	
7659	NaN	Hospitalized	2020-11-04		Vadodara	Gujarat			7660	GJ		2020-11-04	
3459	NaN	Hospitalized	2020-04-04		Alappuzha	Kerala			3460	KL		2020-04-04	
1753	NaN	Hospitalized	2020-01-04		Gautam Buddha Nagar	Uttar Pradesh			1754	UP		2020-01-04	TBD
1238	NaN	Hospitalized	2020-03-30		Kasaragod	Kerala			1239				
10946	NaN	Hospitalized	2020-04-14		Ahmadabad	Gujarat			10947				
2579	17.0	Hospitalized	2020-03-04	Ahmadabad	Ahmadabad	Gujarat	M		2580				
12748	NaN	Hospitalized	2020-04-16	Thane	Thane	Maharashtra			12749				
6466	NaN	Hospitalized	2020-09-04		Bhopal	Madhya Pradesh			6467				
8728	NaN	Hospitalized	2020-12-04		Bhopal	Madhya Pradesh			8729				

```
1238          KL                          2020-03-30                 TBD
10946         GJ                          2020-04-14
2579          GJ                          2020-03-04               Local
12748         MH                          2020-04-16
6466          MP                          2020-09-04
8728          MP                          2020-12-04

       durationOfAnyStatus
9356                   0.0
7659                   0.0
3459                   0.0
1753                   0.0
1238                   0.0
10946                  0.0
2579                   0.0
12748                  0.0
6466                   0.0
8728                   0.0
```

[19]:
```
profile = pandas_profiling.ProfileReport(df)
profile.to_file(output_file="covid19_data_after_preprocessing.html")
```

Observations

- Dataset info

Data	Info
Number of variables	14
Number of observations	8067
Missing cells	301 (0.3%)
Duplicate rows	0 (0.0%)
Total size in memory	882.4 KiB

- Variables types

Varibale	Count
Numeric	2
Categorical	12

- `agebracket` has a high cardinality: 86 distinct values
- `detectedcity` has a high cardinality: 314 distinct values
- `detecteddistrict` has a high cardinality: 349 distinct values
- `durationOfAnyStatus` has 7579 (94.0%) zeros

- `durationOfAnyStatus` has 301 (3.7%) missing values
- `statepatientnumber` has a high cardinality: 1463 distinct values
- `currentstatus` distribution

Value	Count	Frequency (%)
Hospitalized	7706	95.5%
Unknown	192	2.4%
Recovered	137	1.7%
Deceased	31	0.4%
Migrated	1	< 0.1%

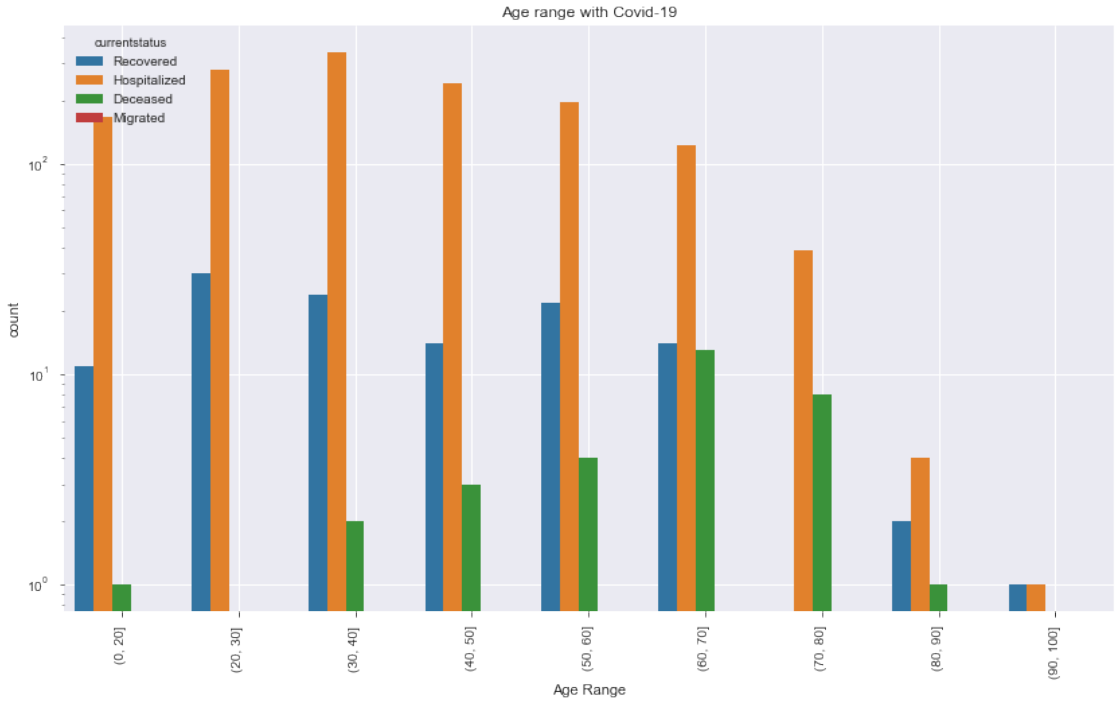
- `typeoftransmission` distribution

Value	Count	Frequency (%)
Unknown	5233	64.9%
Local	1606	19.9%
TBD	630	7.8%
Imported	596	7.4%

[20]:
```
df['agebracket'] = pd.to_numeric(df['agebracket'], errors='coerce')
```

2.1 Age range distribution with Covid-19

[21]:
```
age = df['agebracket']
status = df['currentstatus']
age_bins = [0,20,30,40,50,60,70,80,90,100]
plt.figure(figsize=(14,8))
sns.countplot(x=pd.cut(age, age_bins), hue=status)
plt.xticks(rotation=90)
plt.xlabel("Age Range")
plt.yscale('log')
plt.title("Age range with Covid-19")
plt.grid(True)
plt.show()
```



2.2 Covid-19 Cases Distribution across States

[22]:
```
state = df.groupby('detectedstate').count()
fig = px.pie(state, values='currentstatus', names=state.index
             ,color_discrete_sequence=px.colors.sequential.
 ↪Plasma_r,title='Covid19 cases based on State')
fig.update_traces(textposition='outside', textinfo='value+label')
fig.show()
```

2.3 Covid-19 cases distribution based on Nationality

[23]:
```
nationality = df.groupby('nationality').count()
fig = px.pie(nationality, values='currentstatus', names=nationality.index
             ,color_discrete_sequence=px.colors.qualitative.G10,title='Covid19␣
 ↪cases based on Nationality in India')
fig.update_traces(textposition='outside', textinfo='value+label')
fig.show()
```

2.4 No. of foreign citizens affected by Covid-19 in India

[24]:
```
temp = df.groupby('nationality')['patientnumber'].count().reset_index()
temp = temp.sort_values('patientnumber')
temp = temp[temp['nationality']!='']
temp = temp[temp['nationality']!='India']
fig = px.bar(temp, x='patientnumber', y='nationality', orientation='h',␣
 ↪text='patientnumber', width=600,
       color_discrete_sequence = ['#35495e'], title='No. of foreign citizens')
fig.update_xaxes(title='')
fig.update_yaxes(title='')
fig.show()
```

2.5 Covid-19 distribution based on Type of Transmission

[25]:
```
temp = pd.DataFrame(df[['typeoftransmission']].
 ↪groupby('typeoftransmission')['typeoftransmission'].count())
temp = temp.dropna()
temp.columns = ['count']
temp = temp.reset_index().sort_values(by='count')

fig = px.bar(temp, x='count', y='typeoftransmission', orientation='h',␣
 ↪text='count', width=600, height=300,
       color_discrete_sequence = ['#35495e'], title='Type of transmission')
fig.update_xaxes(title='')
fig.update_yaxes(title='')
fig.show()
```

2.6 Covid-19 cases Vs Age Brackets along with current status

[26]:
```
fig = plotly.subplots.make_subplots(
    rows=1, cols=2, column_widths=[0.8, 0.2],
    subplot_titles = ['Cases vs Age', ''],
    specs=[[{"type": "histogram"}, {"type": "pie"}]]
)

temp = df[['agebracket', 'currentstatus']].dropna()
print('Total no. of values :', df.shape[0], '\nNo. of missing values :', df.
 ↪shape[0]-temp.shape[0], '\nNo. of available values :', df.shape[0]-(df.
 ↪shape[0]-temp.shape[0]))
gen_grp = temp.groupby('currentstatus').count()

fig.add_trace(go.Pie(values=gen_grp.values.reshape(-1).tolist(),␣
 ↪labels=['Deceased', 'Hospitalized', 'Recovered'],
                     marker_colors = ['#fd0054', '#393e46', '#40a798'], hole=.
 ↪3),1, 2)
```

```
fig.add_trace(go.
 ↪Histogram(x=temp[temp['currentstatus']=='Deceased']['agebracket'],␣
 ↪nbinsx=50, name='Deceased', marker_color='#fd0054'), 1, 1)
fig.add_trace(go.
 ↪Histogram(x=temp[temp['currentstatus']=='Recovered']['agebracket'],␣
 ↪nbinsx=50, name='Recovered', marker_color='#40a798'), 1, 1)
fig.add_trace(go.
 ↪Histogram(x=temp[temp['currentstatus']=='Hospitalized']['agebracket'],␣
 ↪nbinsx=50, name='Hospitalized', marker_color='#393e46'), 1, 1)

fig.update_layout(showlegend=False)
fig.update_layout(barmode='stack')
fig.data[0].textinfo = 'label+text+value+percent'

fig.show()
```

```
Total no. of values : 13060
No. of missing values : 11518
No. of available values : 1542
```

2.7 Covid-19 cases Gender Vs Age Brackets along with gender distribution

[27]:
```
fig = plotly.subplots.make_subplots(
    rows=1, cols=2, column_widths=[0.8, 0.2],
    subplot_titles = ['Gender vs Age', ''],
    specs=[[{"type": "histogram"}, {"type": "pie"}]]
)

temp = df[['agebracket', 'gender']].dropna()
print('Total no. of values :', df.shape[0], '\nNo. of missing values :', df.
 ↪shape[0]-temp.shape[0], '\nNo. of available values :', df.shape[0]-(df.
 ↪shape[0]-temp.shape[0]))
gen_grp = temp.groupby('gender').count()

fig.add_trace(go.Histogram(x=temp[temp['gender']=='F']['agebracket'],␣
 ↪nbinsx=50, name='Female', marker_color='#6a0572'), 1, 1)
fig.add_trace(go.Histogram(x=temp[temp['gender']=='M']['agebracket'],␣
 ↪nbinsx=50, name='Male', marker_color='#39065a'), 1, 1)

fig.add_trace(go.Pie(values=gen_grp.values.reshape(-1).tolist(),␣
 ↪labels=['Female', 'Male'], marker_colors = ['#6a0572', '#39065a']),1, 2)

fig.update_layout(showlegend=False)
fig.update_layout(barmode='stack')
fig.data[2].textinfo = 'label+text+value+percent'
```

```
fig.show()
```

```
Total no. of values : 13060
No. of missing values : 11518
No. of available values : 1542
```

2.8 Covid-19 cases Age distribution of confirmed patients

[28]:
```
print('Total no. of values :', df.shape[0], '\nNo. of missing values :', df.
 ↪shape[0]-df[['agebracket']].dropna().shape[0],
      '\nNo. of available values :', df.shape[0]-(df.
 ↪shape[0]-df[['agebracket']].dropna().shape[0]))
px.histogram(df, x='agebracket', color_discrete_sequence = ['#35495e'],␣
 ↪nbins=50,
             title='Distribution of ages of confirmed patients')
```

```
Total no. of values : 13060
No. of missing values : 11518
No. of available values : 1542
```

2.9 Covid-19 cases distribution across states

[29]:
```
dist = df.groupby(['detectedstate', 'detecteddistrict'])['patientnumber'].
 ↪count().reset_index()
dist.head()
fig = px.treemap(dist, path=['detectedstate', 'detecteddistrict'],␣
 ↪values='patientnumber', height=700,
           title='Number of Confirmed Cases', color_discrete_sequence = px.
 ↪colors.qualitative.Prism)
fig.data[0].textinfo = 'label+text+value'
fig.show()
```

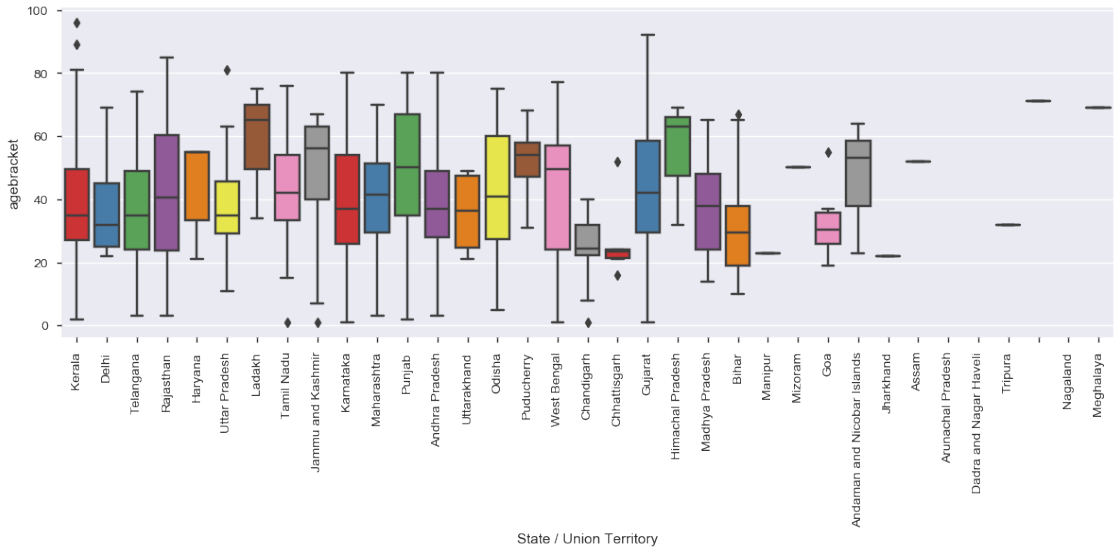
[30]:
```
df['statuschangedate'] = pd.to_datetime(df['statuschangedate'])
df['dateannounced'] = pd.to_datetime(df['dateannounced'])
```

[31]:
```
temp = df[['dateannounced', 'statuschangedate', 'currentstatus']].dropna()
temp = temp[temp['statuschangedate']!=temp['dateannounced']]
temp['no_of_days'] = temp['statuschangedate'] - temp['dateannounced']
temp['no_of_days'] = temp['no_of_days'].dt.days
temp = temp[temp['no_of_days']>0]
```

[32]:
```
print('Total no. of values :', df.shape[0], '\nNo. of missing values :', df.
 ↪shape[0]-temp.shape[0], '\nNo. of available values :', df.shape[0]-(df.
 ↪shape[0]-temp.shape[0]))
px.box(temp, x="currentstatus", y="dateannounced", color='currentstatus')
```

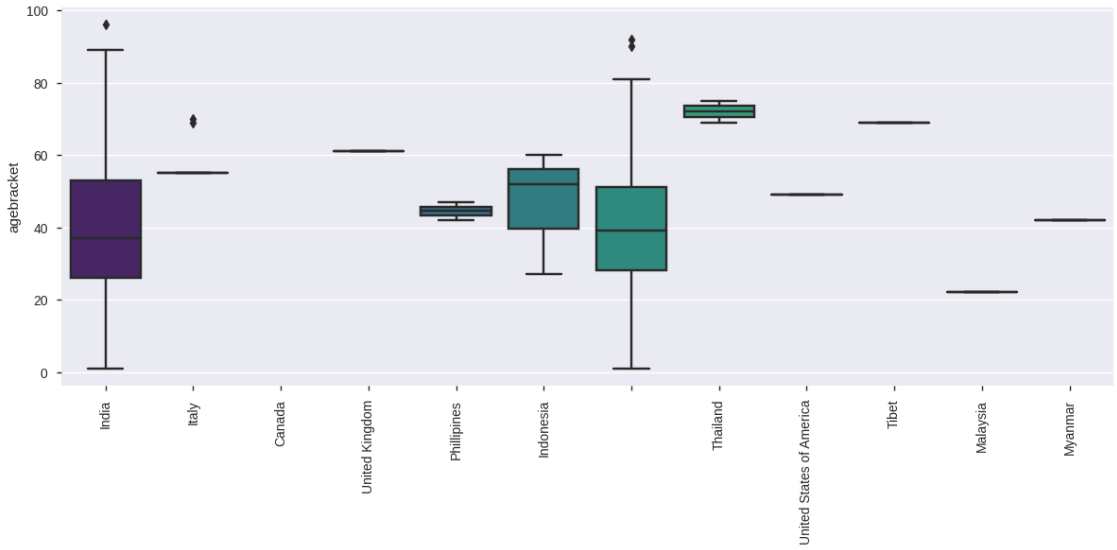
```
Total no. of values : 13060
No. of missing values : 12948
No. of available values : 112
```

[33]:
```
plt.figure(figsize=(12, 6), dpi = 100)
sns.boxplot(x = 'detectedstate', y = 'agebracket', data = df, palette = 'Set1')
plt.xlabel('State / Union Territory')
plt.ylabel('agebracket')
plt.xticks(rotation = 90)
plt.tight_layout()
plt.show()
```



2.9.1 Nationality AgeBracket Distribution

[40]:
```
plt.figure(figsize=(12, 6), dpi = 100)
sns.boxplot(x = 'nationality', y = 'agebracket', data = df, palette = 'viridis')
plt.xlabel('')
plt.xticks(rotation=90)
plt.ylabel('agebracket')
plt.tight_layout()
plt.show()
```



2.9.2 Age Distribution of COVID-19 Recovered Patients

[34]:
```
dist = df.groupby(['agebracket','currentstatus'])['patientnumber'].count().
 ↪reset_index()
dist = dist[dist['currentstatus']=='Recovered']
dist
fig = px.bar(dist, x='agebracket', y='patientnumber', orientation='v',␣
 ↪text='patientnumber', width=1200,
       color_discrete_sequence = ['#00CC96'], title='Age distribution of␣
 ↪Recovered COVID Patient')

fig.update_xaxes(title='Age')
fig.update_yaxes(title='# Patient')
fig.show()
```

2.9.3 Gender Distribution of COVID-19 Recovered Patients

[35]:
```
dist = df.groupby(['gender','currentstatus'])['patientnumber'].count().
 ↪reset_index()
dist = dist[dist['currentstatus']=='Recovered']
dist
fig = px.pie(dist, values=dist['patientnumber'], names=dist.gender
         ,color_discrete_sequence=["#636EFA"],title='Gender distribution of␣
 ↪COVID19 Recovered Patients')
fig.update_traces(textposition='outside', textinfo='value+label')
fig.show()
```

[36]:
```
df.head()
```

[36]:

	agebracket	currentstatus	dateannounced	detectedcity	\
0	20.0	Recovered	2020-01-30	Thrissur	
1	NaN	Recovered	2020-02-02	Alappuzha	
2	NaN	Recovered	2020-03-02	Kasaragod	
3	45.0	Recovered	2020-02-03	East Delhi (Mayur Vihar)	
4	24.0	Recovered	2020-02-03	Hyderabad	

	detecteddistrict	detectedstate	gender	nationality	patientnumber	statecode	\
0	Thrissur	Kerala	F	India	1	KL	
1	Alappuzha	Kerala		India	2	KL	
2	Kasaragod	Kerala		India	3	KL	
3	East Delhi	Delhi	M	India	4	DL	
4	Hyderabad	Telangana	M	India	5	TG	

	statepatientnumber	statuschangedate	typeoftransmission	durationOfAnyStatus
0	KL-TS-P1	2020-02-14	Imported	15.0
1	KL-AL-P1	2020-02-14	Imported	12.0
2	KL-KS-P1	2020-02-14	Imported	-17.0
3	DL-P1	2020-03-15	Imported	41.0
4	TS-P1	2020-02-03	Imported	0.0

[ ]: