In [1]:

```
import requests
from datetime import date

# pull data from covid19api.com
current_date = date.today().strftime("%Y-%m-%d")
data_request = requests.get('https://api.covid19api.com/country/singapore?from=2020-01-01
data = data_request.text
```

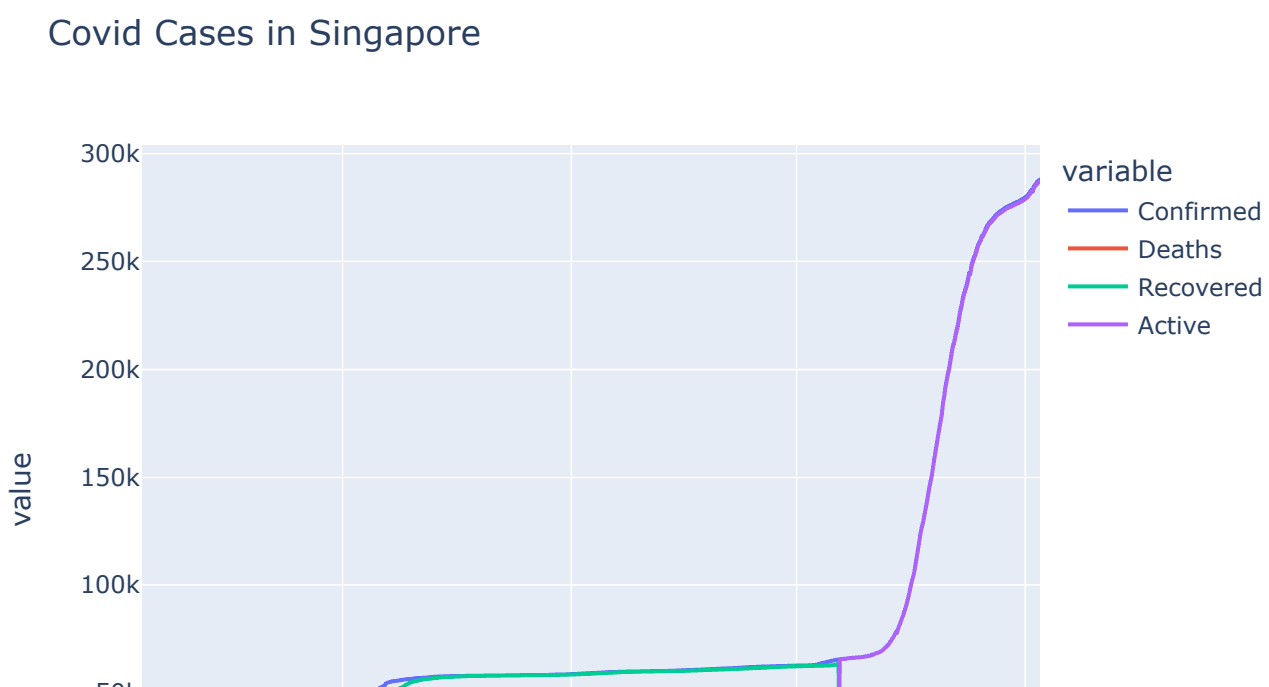
In [2]:

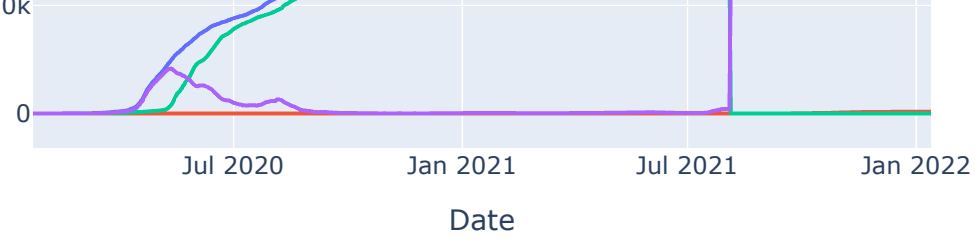
```
import pandas as pd

# extract case data from json
covid_cases = pd.read_json(data)
covid_cases = covid_cases[['Confirmed','Deaths','Recovered','Active','Date']]
covid_cases.set_index('Date', inplace=True)
print(covid_cases)
```

```
                           Confirmed  Deaths  Recovered  Active
Date
2020-01-22 00:00:00+00:00          0       0          0       0
2020-01-23 00:00:00+00:00          1       0          0       1
2020-01-24 00:00:00+00:00          3       0          0       3
2020-01-25 00:00:00+00:00          3       0          0       3
2020-01-26 00:00:00+00:00          4       0          0       4
...                              ...     ...        ...     ...
2022-01-08 00:00:00+00:00     284802     837          0  283965
2022-01-09 00:00:00+00:00     285647     838          0  284809
2022-01-10 00:00:00+00:00     286397     838          0  285559
2022-01-11 00:00:00+00:00     287243     838          0  286405
2022-01-13 00:00:00+00:00     288125     839          0  287286

[722 rows x 4 columns]
```

In [3]:

```
import plotly.express as px

# display line graph of cases over time
fig1 = px.line(covid_cases, title='Covid Cases in Singapore')
fig1.show()
```





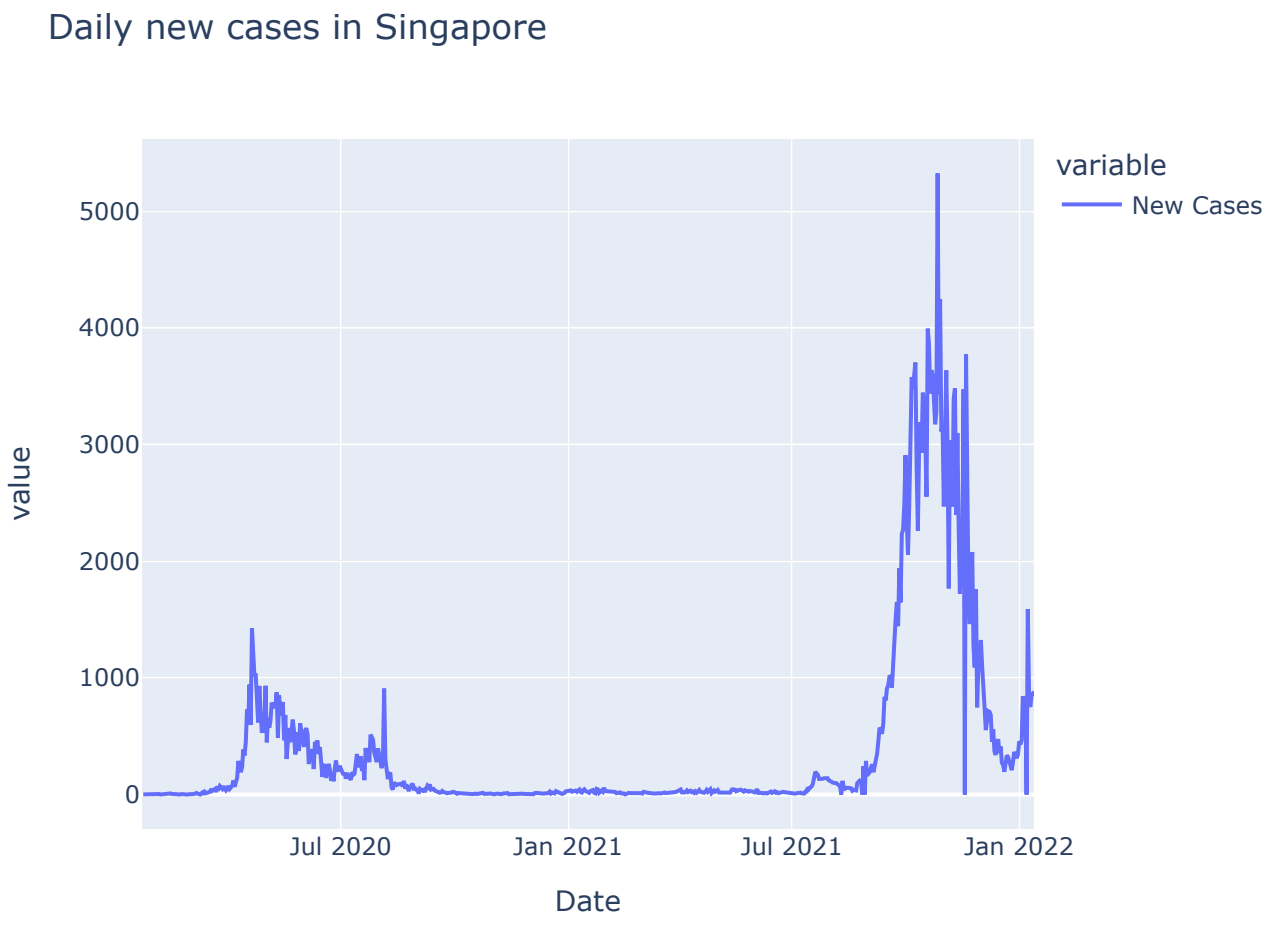
In [4]:

```
# show daily new cases
covid_cases['New Cases'] = covid_cases['Confirmed'].diff()
print(covid_cases['New Cases'])
```

```
Date
2020-01-22 00:00:00+00:00       NaN
2020-01-23 00:00:00+00:00       1.0
2020-01-24 00:00:00+00:00       2.0
2020-01-25 00:00:00+00:00       0.0
2020-01-26 00:00:00+00:00       1.0
                                ...
2022-01-08 00:00:00+00:00    1588.0
2022-01-09 00:00:00+00:00     845.0
2022-01-10 00:00:00+00:00     750.0
2022-01-11 00:00:00+00:00     846.0
2022-01-13 00:00:00+00:00     882.0
Name: New Cases, Length: 722, dtype: float64
```

In [5]:

```
# create line graph of daily new cases
fig2 = px.line(covid_cases['New Cases'], title='Daily new cases in Singapore')
fig2.show()
```



In [6]:

```
import dash
from dash import dcc
from dash import html

# setup dashboard
app = dash.Dash(__name__)
app.title = "COVID-19 in Singapore"

app.layout = html.Div(
    children=[
        html.H1(children="COVID-19 in Singapore",),
        dcc.Graph(
            figure=fig1
        ),
        dcc.Graph(
            figure=fig2
        ),
    ]
)

# run dashboard
if __name__ == "__main__":
    app.run_server(debug=True)
```

```
Dash is running on http://127.0.0.1:8050/

 * Serving Flask app "__main__" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: on
An exception has occurred, use %tb to see the full traceback.

SystemExit: 1
C:\Users\Ryan\anaconda3\lib\site-packages\IPython\core\interactiveshell.py:3452: UserWarni
ng:

To exit: use 'exit', 'quit', or Ctrl-D.
```

In [ ]: