

# Muhammad Athar Althariq Irawan

09011282025043

SK4A

```
In [ ]: from FlightRadar24.api import FlightRadar24API
import pandas as pd
fr_api = FlightRadar24API()
```

```
In [ ]: airports = fr_api.get_airports()
selesai = pd.DataFrame(airports)
```

```
In [ ]: selesai.to_excel("excelflight.xlsx")
selesai.to_csv("csvflight.csv")
```

```
In [ ]: df = pd.read_csv('csvflight.csv')
```

```
In [ ]: df.head(5)
```

```
Out[ ]: Unnamed: 0      name  iata  icao      lat      lon  country  alt
0          0      A Coruna Airport  LCG  LECO  43.302059  -8.377250    Spain  326
1          1  Aachen Merzbruck Airport  AAH  EDKA  50.823051   6.186111  Germany  623
2          2      Aalborg Airport  AAL  EKYT  57.092781   9.849164  Denmark  10
3          3      Aarhus Airport  AAR  EKAH  56.300011  10.619000  Denmark  82
4          4      Aarhus Sea Airport  QEA  EKAC  56.151993  10.247725  Denmark   1
```

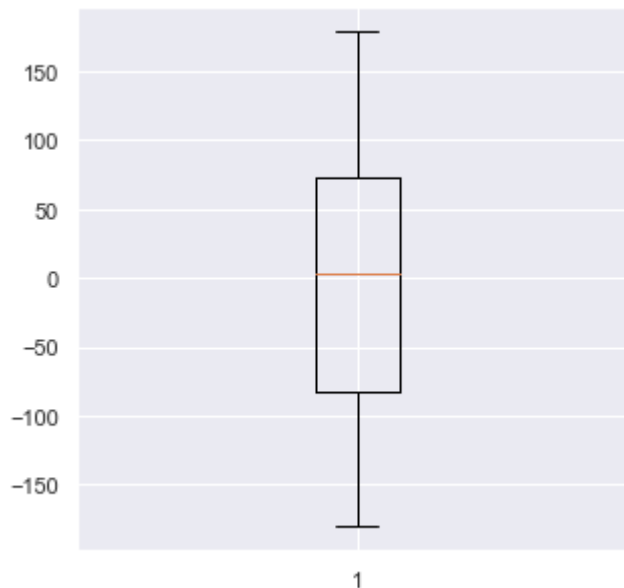
```
In [ ]: df.dtypes
```

```
Out[ ]: Unnamed: 0      int64
name          object
iata          object
icao           object
lat           float64
lon           float64
country       object
alt           int64
dtype: object
```

```
In [ ]: import matplotlib.pyplot as plt
        %matplotlib inline
        import seaborn as sns
```

```
In [ ]: plt.boxplot(df['lon'])
```

```
Out[ ]: {'whiskers': [<matplotlib.lines.Line2D at 0x16f581199a0>,
                    <matplotlib.lines.Line2D at 0x16f581f7cd0>],
         'caps': [<matplotlib.lines.Line2D at 0x16f581f7a00>,
                  <matplotlib.lines.Line2D at 0x16f581f74c0>],
         'boxes': [<matplotlib.lines.Line2D at 0x16f58119e80>],
         'medians': [<matplotlib.lines.Line2D at 0x16f581f7610>],
         'fliers': [<matplotlib.lines.Line2D at 0x16f58112100>],
         'means': []}
```

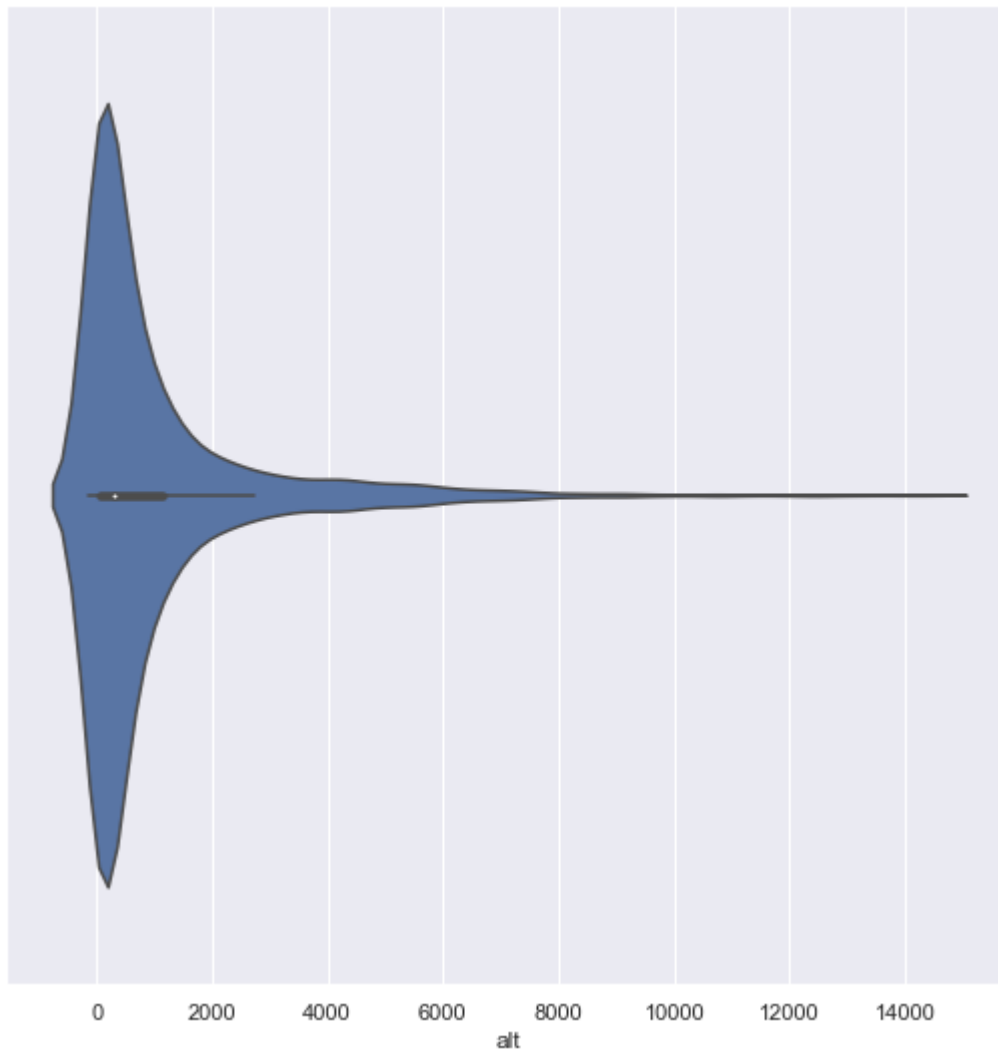


```
In [ ]: sns.set(rc={'figure.figsize':(9,9)})
        sns.violinplot(df['alt'])
```

c:\Users\hp\AppData\Local\Programs\Python\Python39\lib\site-packages\seaborn\\_decorator.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

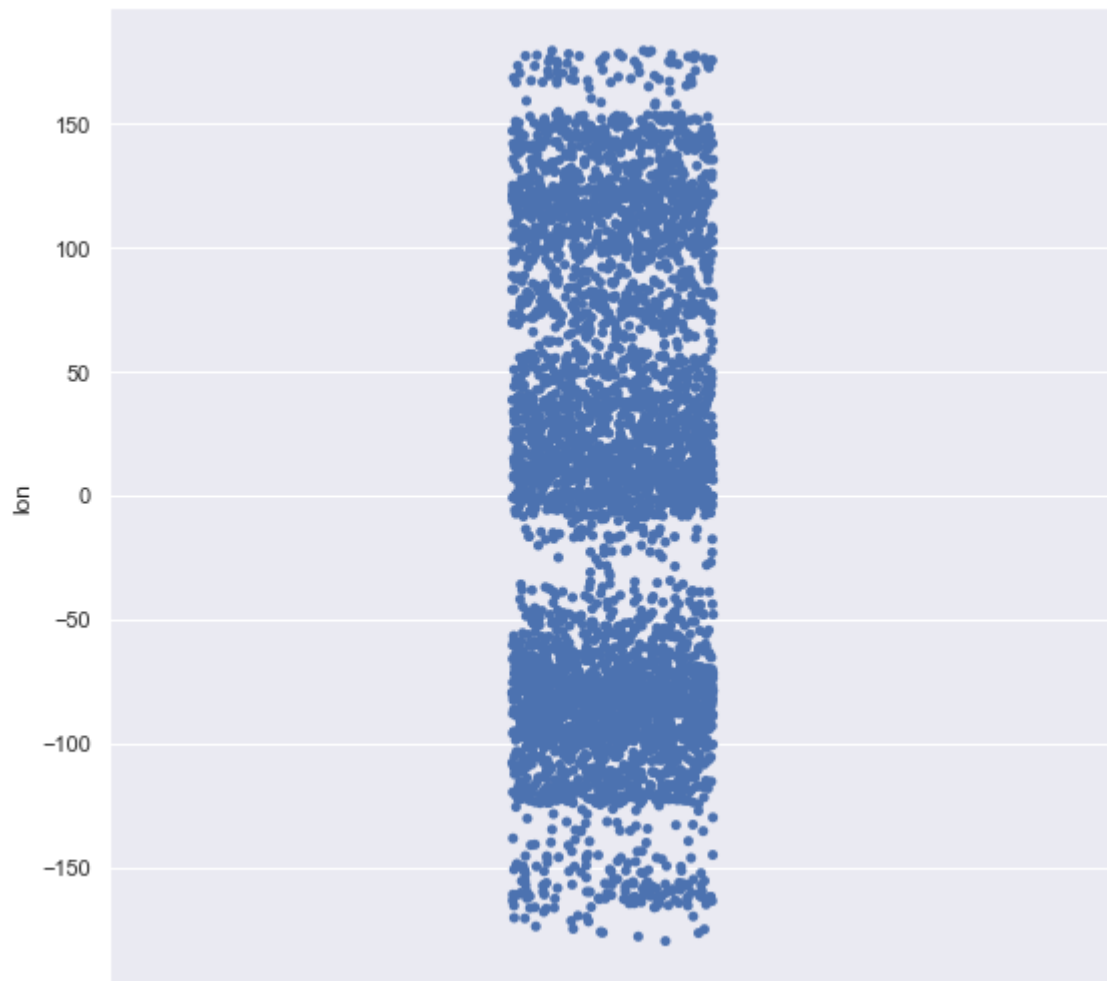
```
warnings.warn(
<AxesSubplot:xlabel='alt'>
```

```
Out[ ]:
```



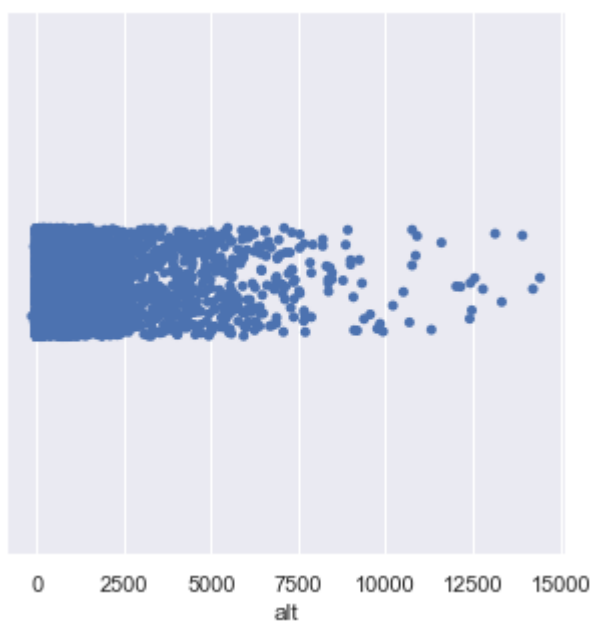
```
In [ ]: sns.stripplot(y=df['lon'])
```

```
Out[ ]: <AxesSubplot:ylabel='lon'>
```



```
In [ ]: sns.set(rc={'figure.figsize':(5,5)})  
sns.stripplot(x=df['alt'])
```

```
Out[ ]: <AxesSubplot:xlabel='alt'>
```



```
In [ ]: sns.scatterplot(x=df.index,y=df['lat'], hue=df['country'])
```

Out[ ]: <AxesSubplot:ylabel='lat'>



●	New Zealand
●	Peru
●	Tanzania
●	Saint Helena
●	Turkmenistan
●	Eritrea
●	Paraguay
●	Bahrain
●	Cameroon
●	Nepal
●	Pakistan
●	Argentina
●	Azerbaijan
●	Panama
●	Mali
●	Laos
●	Thailand
●	Central African Republic
●	Bosnia And Herzegovina
●	Gambia
●	Dominican Republic
●	Venezuela
●	Bangladesh
●	Saint Kitts And Nevis
●	Equatorial Guinea
●	Georgia
●	Mozambique
●	Lebanon
●	Portugal
●	Serbia
●	Belize
●	Saint Vincent And The Grenadines
●	Somalia
●	Bermuda
●	Switzerland
●	Myanmar (Burma)
●	Poland
●	Kyrgyzstan
●	Guinea-Bissau
●	Malawi
●	South Africa
●	Nicaragua
●	Sierra Leone
●	Cape Verde
●	Croatia
●	Afghanistan
●	Slovakia
●	Congo
●	Belarus
●	Barbados
●	Czechia
●	Brunei
●	Hungary
●	Burundi
●	Papua New Guinea
●	Zimbabwe
●	Democratic Republic Of The Congo
●	Vietnam
●	Bulgaria
●	South Korea
●	Angola
●	Cuba
●	Senegal

- Haiti
- Fiji
- Saint Lucia
- French Guiana
- Cayman Islands
- Ukraine
- Taiwan
- Bolivia
- Moldova
- Micronesia
- Cocos (Keeling) Islands
- Sri Lanka
- Honduras
- Guinea
- Ireland
- Benin
- Ecuador
- Antarctica
- Maldives
- Timor-Leste (East Timor)
- Tunisia
- Djibouti
- Dominica
- Costa Rica
- Tajikistan
- Mayotte
- Israel
- Sudan
- Finland
- Uganda
- Tonga
- Guatemala
- Tuvalu
- Vanuatu
- Wallis And Futuna
- Botswana
- Bhutan
- Guyana
- Gibraltar
- Turks And Caicos Islands
- Austria
- Grenada
- Guam
- Guernsey
- Armenia
- Hong Kong
- Solomon Islands
- New Caledonia
- Jersey
- South Sudan
- Estonia
- Zambia
- Namibia
- Lithuania
- Oman
- Rwanda
- Jamaica
- Kiribati
- Albania
- Kuwait
- Marshall Islands
- Cyprus
- Gabon

- Latvia
- Slovenia
- Togo
- Malta
- Luxembourg
- Macao
- Eswatini
- Martinique
- Lesotho
- Liberia
- Monaco
- Uruguay
- Montserrat
- Falkland Islands (Malvinas)
- Chad
- Nauru
- Niger
- Mauritania
- North Macedonia
- Aruba
- Burkina Faso
- American Samoa
- Suriname
- Cambodia
- Montenegro
- Guadeloupe
- Mauritius
- Trinidad And Tobago
- Seychelles
- Kosovo
- North Korea
- Northern Mariana Islands
- Reunion
- Saint Pierre And Miquelon
- El Salvador
- Sao Tome And Principe
- Singapore
- Virgin Islands, Us
- Anguilla
- Faroe Islands
- United States Minor Outlying Islands
- Curacao

```
In [ ]: plt.scatter(df.index,df['alt'])  
plt.show()
```



