**COVACCINE ANALYSIS**

**PHASE 3:**

In this section begin building your project by loading and preprocessing the dataset.

PROGRAM:

import pandas as pd

data = pd.read\_csv('data 3.csv') print(data.head())

data = data.dropna()

data = data.drop\_duplicates()

print(data.describe()) data.to\_csv("cleaned\_data.csv", index=False)

**OUTPUT:**

country iso\_code date total\_vaccinations

people\_vaccinated \

0 Afghanistan AFG 2021-02-22 0.0

0.0

1 Afghanistan AFG 2021-02-23 NaN

NaN NaN NaN

3 Afghanistan AFG 2021-02-25 NaN

2 Afghanistan AFG 2021-02-24 NaN

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | Afghanistan AFG 20 | 21-02-26 | NaN |
| NaN |  |  |  |
|  | people\_fully\_vaccinated | daily\_vaccinations\_raw | daily\_vaccinations |
| \ |  |  |  |
| 0 | NaN | NaN | NaN |
|  |  |  |  |
| 1 | NaN | NaN | 1367.0 |
|  |  |  |  |
| 2 | NaN | NaN | 1367.0 |
|  |  |  |  |
| 3 | NaN | NaN | 1367.0 |
|  |  |  |  |
| 4 | NaN | NaN | 1367.0 |

total\_vaccinations\_per\_hundred

0.0

NaN NaN NaN NaN

people\_vaccinated\_per\_hundred

0.0

NaN NaN NaN NaN

\

0

1

2

3

4

0

1

2

3

4

vaccines Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi... Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi... Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi... Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi... Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...

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people\_fully\_vaccinated\_per\_hundred daily\_vaccinations\_per\_million

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0 NaN NaN

1 NaN 34.0

2 NaN 34.0

3 NaN 34.0

4 NaN 34.0

|  |  |  |  |
| --- | --- | --- | --- |
| source\_name source\_website   1. World Health Organization https://covid19.who.int/ 2. World Health Organization https://covid19.who.int/ 3. World Health Organization https://covid19.who.int/ 4. World Health Organization https://covid19.who.int/ 5. World Health Organization https://covid19.who.int/ total\_vaccinations people\_vaccinated people\_f | | | ully\_vaccinated |
| \ |  |  |  |
| count | 3.084700e+04 | 3.084700e+04 | 3.084700e+04 |
|  |  |  |  |
| mean | 3.980375e+07 | 2.177533e+07 | 1.579596e+07 |
|  |  |  |  |
| std | 1.451667e+08 | 8.053173e+07 | 5.898165e+07 |
|  |  |  |  |
| min | 3.000000e+00 | 3.000000e+00 | 1.000000e+00 |
|  |  |  |  |
| 25% | 1.153332e+06 | 7.339795e+05 | 3.704450e+05 |
|  |  |  |  |
| 50% | 6.335305e+06 | 3.688092e+06 | 2.211035e+06 |
|  |  |  |  |
| 75% | 2.520629e+07 | 1.440668e+07 | 9.121526e+06 |
|  |  |  |  |
| max | 3.243599e+09 | 1.275541e+09 | 1.240777e+09 |

daily\_vaccinations\_raw daily\_vaccinations \

|  |  |  |
| --- | --- | --- |
| count | 3.084700e+04 | 3.084700e+04 |
| mean | 2.021875e+05 | 1.975297e+05 |
| std | 7.041931e+05 | 6.400504e+05 |
| min | 0.000000e+00 | 0.000000e+00 |
| 25% | 5.498000e+03 | 7.329500e+03 |
| 50% | 2.908100e+04 | 3.247200e+04 |
| 75% | 1.344580e+05 | 1.402915e+05 |
| max | 1.862727e+07 | 1.307071e+07 |

total\_vaccinations\_per\_hundred people\_vaccinated\_per\_hundred \

|  |  |  |
| --- | --- | --- |
| count | 30847.000000 | 30847.000000 |
|  |  |  |
| mean | 88.609156 | 44.793028 |
|  |  |  |
| std | 67.492111 | 28.464379 |
|  |  |  |
| min | 0.000000 | 0.000000 |
|  |  |  |
| 25% | 25.475000 | 17.190000 |
|  |  |  |
| 50% | 81.470000 | 48.160000 |
|  |  |  |
| 75% | 140.745000 | 70.330000 |
|  |  |  |
| max | 345.370000 | 124.760000 |

people\_fully\_vaccinated\_per\_hundred daily\_vaccinations\_per\_million

|  |  |
| --- | --- |
| count | 30847.000000 |
| 30847.000000 |  |
| mean | 36.563440 |
| 4254.195708 |  |
| std | 28.532602 |
| 3723.291475 |  |
| min | 0.000000 |
| 0.000000 |  |
| 25% | 7.400000 |
| 1567.500000 |  |
| 50% | 34.110000 |
| 3254.000000 |  |
| 75% | 63.570000 |
| 6069.500000 |  |
| max | 122.370000 |
| 78604.000000 |  |