Assignment 1 – Web Api Data and Data Analysis in MS Excel

1. Given the following data: [Please submit your MS Excel file]

68.83783784, 101.3703704, 72.31818182, 94.5, 67.92, 74.18181818, 69.63636364, 84.66666667, 91.91666667, 75.08333333, 95.62962963, 65.16, 78.83333333, 65.86956522, 98.54411765, 73.48, 83.69230769, 64.6, 82, 70.08333333, 93.17391304, 76.38461538, 72.75862069, 84.95833333, 98.5, 78.12, 66.81818182, 90.44444444, 103.16

1. Please discretize the data using 5 categories using the vlookup function (please show your lookup array and how you came to the bin sizes) [4pts]

Range = max-min

Range / 5 = bin sizes

=VLOOKUP(A2,E$10:F$14,2,TRUE)

1. Please create a Histogram using bin size of 5. [3pts]
2. Please provide Summary statistics for the data. [3pts]

|  |  |
| --- | --- |
| *Column1* | |
|  |  |
| Mean | 80.78833221 |
| Standard Error | 2.261161645 |
| Median | 78.12 |
| Mode | #N/A |
| Standard Deviation | 12.17672812 |
| Sample Variance | 148.2727076 |
| Kurtosis | -1.180696726 |
| Skewness | 0.402119488 |
| Range | 38.78 |
| Minimum | 64.6 |
| Maximum | 103.38 |
| Sum | 2342.861634 |
| Count | 29 |

1. Why is the Mode = #N/A? [1pt]

Mode is NA because no two values are the same.

1. Using the following web api: <https://api.opencovid.ca/>, import the vaccine data for the population with 3rd doses administered (i.e. vaccine\_administration\_dose\_3) for all Canadian Provinces into MS Excel e.g. [4pts]

|  |  |  |  |
| --- | --- | --- | --- |
| **Province** | **Date** | **Cumulative Doses** | **Daily Doses** |
| Nova Scotia | 2022-02-20 | 496533 | 11494 |
| Nova Scotia | 2022-02-21 | 496533 | 0 |
| Nova Scotia | 2022-02-22 | 496533 | 0 |
| Nova Scotia | 2022-02-23 | 496533 | 0 |
| Nova Scotia | 2022-02-24 | 496533 | 0 |
| Nova Scotia | 2022-02-25 | 496533 | 0 |
| Nova Scotia | 2022-02-26 | 496533 | 0 |

Excerpt only.

1. Create a Flourish chart using the 3rd Dose cumulative data that uses the “Bar Chart Race” chart. You result should look similar to the following chart - only, it should use the 3rd Dose data instead of the cases data shown below: [5pts]

Timeline

Description automatically generated with medium confidence

<https://public.flourish.studio/visualisation/7513096/>

Please submit the following in Brightspace by midnight Sun, 30th October:

1. MS Excel file (histo.xslx) containing: vlookup discretization/categorization, histogram
2. MS Excel file (vaccine.xslx) containing 3rd Dose web api data, pivot table
3. Link to your flourish visualization.