Assignment 1 – Web Api Data (MS Excel and Flourish) and Data Analysis in MS Excel [ total 20 pts]

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]
2. Please create a Histogram using bin size of 5. Your result should look like this: [3pts]
3. Please provide Summary statistics for the data. Your result should look like this: [3pts]

|  |  |
| --- | --- |
| *Summary Stats* | |
| Mean | 80.780746 |
| Standard Error | 2.258465795 |
| Median | 78.12 |
| Mode | #N/A |
| Standard Deviation | 12.16221052 |
| Sample Variance | 147.9193647 |
| Kurtosis | -1.189402217 |
| Skewness | 0.398458223 |
| Range | 38.56 |
| Minimum | 64.6 |
| Maximum | 103.16 |
| Sum | 2342.641634 |
| Count | 29 |

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

1. Using the following web api: <https://opencovid.ca/api/>, import the vaccine completion data (i.e., 2nd doses, cvaccine) for all Canadian Provinces into MS Excel e.g. [4pts]

|  |  |  |  |
| --- | --- | --- | --- |
| **cumulative\_cvaccine** | **cvaccine** | **date\_vaccine\_completed** | **province** |
| 0 | 0 | 12-01-2021 | Alberta |
| 0 | 0 | 13-01-2021 | Alberta |
| 0 | 0 | 14-01-2021 | Alberta |
| 0 | 0 | 15-01-2021 | Alberta |
| 0 | 0 | 16-01-2021 | Alberta |
| 0 | 0 | 17-01-2021 | Alberta |
| 0 | 0 | 18-01-2021 | Alberta |
| 0 | 0 | 19-01-2021 | Alberta |
| 0 | 0 | 20-01-2021 | Alberta |
| 7003 | 7003 | 21-01-2021 | Alberta |
| 7272 | 269 | 22-01-2021 | Alberta |
| 7272 | 0 | 23-01-2021 | Alberta |
| 7272 | 0 | 24-01-2021 | Alberta |

Excerpt only.

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

Timeline

Description automatically generated with medium confidence

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

Please submit the following in BrightSpace by midnight Tues, 19th October:

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