Response Summary:

1. Student Information *

First Name	Connor
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Major	Game Development and Design
Course *(e.g. CGT 270-001)*	CGT 270
Term *(e.g. F2019)*	SP2022

2. Email Address *
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3. Visualization Assignment *
- Lab Assignment

Analyze

4. Basic Descriptors: for each data component from the Parse Worksheet, identify basic descriptors (basic statistics). Explain *

PAGE "Pokemon":
Name min: N/A
Name max: N/A
Name avg: N/A
Type min: N/A
Type max: N/A
Type avg: N/A
Because both 'Name' and 'Type' are string values, a numerical min, max, and average is not possible.

HP min: 1
HP max: 255
HP avg: 70
The lowest HP (hit/health point) of all Pokemon is 1, meaning it would only take one hit to defeat them unless it was dodged or avoided.
The highest HP of all Pokemon is 255. This value is interesting as it is the maximum value of a 1-byte number (2^8 possible values). While this does not have any significance to the gameplay, it is an interesting note.
The average HP for all Pokemon is 70.

Attack min: 5
Attack max: 190
Attack avg: 79
The lowest Attack value for all Pokemon is 5, which is interesting as, aside from HP, 5 is the lowest value seen across these data points.
The highest Attack value for all Pokemon is 190.
The average Attack value for all Pokemon is 79.

Defense min: 5
Defense max: 230
Defense avg: 74
The lowest Defense of all Pokemon is 5, mirroring Attack's lowest value.
The highest Defense of all Pokemon is 230.
The average Defense for all Pokemon is 74.

Special Attack min: 10
Special Attack max: 194
Special Attack avg: 73
The lowest Special Attack value of all Pokemon is 10, which is interesting as it is twice as big as the normal minimum Attack value.
The highest Special Attack value of all Pokemon is 194, which is only 4 more than the highest of the normal Attack value.
The average Special Attack value for all Pokemon is 73.

Special Defense min: 20
Special Defense max: 230
Special Defense avg: 72
The lowest Special Defense of all Pokemon is 20, which is 4 times as large as the minimum Defense.
The highest Special Defense of all Pokemon is 230.
The average Special Defense for all Pokemon is 72.

Speed min: 5
Speed max: 180
Speed avg: 69
The lowest Speed of all Pokemon is 5, once again using the absolute minimum value of 5 seen in Attack and Defense.
The highest Speed of all Pokemon is 180.
the average Speed of all Pokemon is 69.

5. Categorize: consider what is similar and what is different? Categorize the data. Are the variables categorical (normal, ordinal, or rank). Are they quantitative (discrete or continuous)? Show categories. Explain. *

The data is ordinal as the data consists of numerical values as well as enums to indicate the Pokemon type. Because the data is not gathered over a period of time from a singular data source, the data is considered discrete as each row of data is not connected to any other one.

6. Temporal: is the data streaming data? How is it stored (all at one time, over several years in years, days, minutes, seconds)? Explain. *

This data is not streaming data as it does not have any time or date attached to it. It could be argued that it can be periodically updated to include new Pokemon added to the games; however, this is very infrequent.

7. Range and Distribution: what is the distribution of the data? Few values, small size, evenly spread, sparse or dense? Explain. *

The distribution of this data is very varied. The lowest standard deviation is 24.9 for 'Attack', followed by 27.3 for 'Special Defense', 28.3 for 'Speed', 30.8 for 'Defense', 31.7 for 'Attack', and 31.8 for 'Special Attack'. Because of how wide the range for all of these values is, the data is very dispersed, and not many values land around the average. Many Pokemon can be identified under categories which throws the average values for all Pokemon off somewhat (not to say the average is incorrect, but it is just a very broad average for a wide range of values).

Evaluate

8. Questions and Assumptions: list at least 3 questions you plan to answer with the data or list the questions if they were provided. Must be complete sentences and end in a question mark. What assumptions are you making? *

Question 1	What are the min, max, and average values across the different types of Pokemon?
Question 2	How do Attack and Defense correlate with Special Attack and Special Defense?
Question 3	Can the type of a Pokemon be determined based on the stats of its different categories?
Assumptions	I believe that separating the Pokemon into different categories will reveal more about the data than simply viewing it all as one large lump of data.