

**Pandas AI**

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## PANDAS AI

- **List values in the columns**

By calling `agent.chat('What are the values in Type columns')`, we're asking it to list the unique values in the Type 1 and Type 2 columns. This column shows the primary type of each Pokémon. The response will help us understand which Pokémon types are present and how they are distributed in the dataset, please refer Figure 3 for the snippet.

**Figure 3 :**  
List the values in columns

```
In [14]: 1 agent.chat('What are the values in Type 1 columns')
Out[14]: 'Grass, Fire, Water, Bug, Normal, Poison, Electric, Ground, Fairy, Fighting, Psychic, Rock, Ghost, Ice, Dragon, Dark, Steel, Flying'

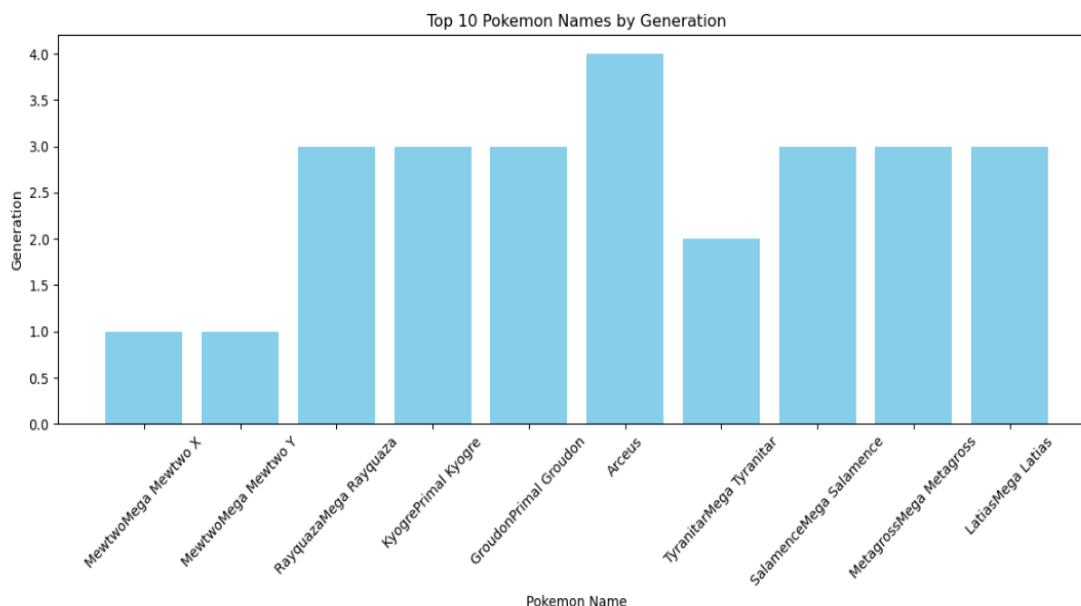
In [17]: 1 agent.chat('What are the values in Type2 columns')
Out[17]: 'Unique values in Type 2 column: Poison, nan, Flying, Dragon, Ground, Fairy, Grass, Fighting, Psychic, Steel, Ice, Rock, Dark, Water, Electric, Fire, Ghost, Bug, Normal'
```

- **Plotting a Graph**

We're asking the Agent to create a graph showing Pokémon generations versus the names of the top 10 Pokémon (Figure 4). This will help us see which generations the top 10 Pokémon belong to. The graph will visually compare these generations with the Pokémon names. This makes it easier to understand the distribution of top Pokémon across different generations.

**Figure 4 :**  
Plot Graph

```
In [25]: 1 agent.chat('Plot a graph to show Generation against top 10 pokemon Name')
Out[25]: 'C:/Users/karti/exports/charts/temp_chart.png'
```



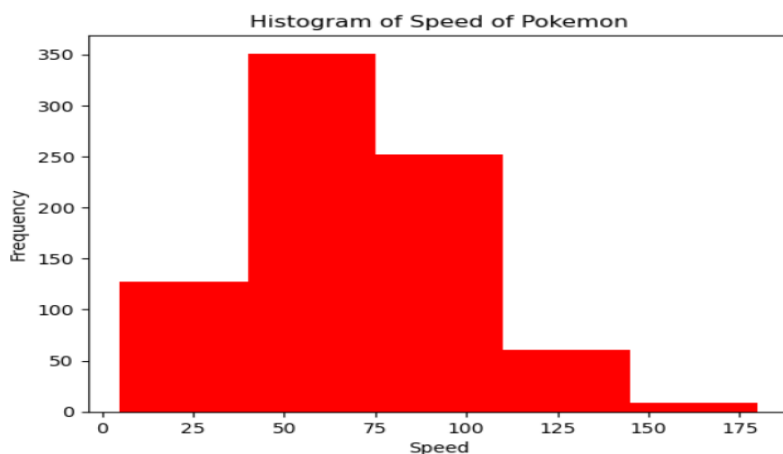
## PANDAS AI

- **Plotting a Histogram**

We're asking the Agent to create a histogram that shows the range of Pokémon speeds, using red color for the bars. This histogram will display how Pokémon speeds are distributed. It helps us visualize how many Pokémon fall into different speed ranges. The red color will make the histogram visually striking and easy to interpret. Please refer to Figure 5 for the visuals.

**Figure 5:**  
Histogram Plot

```
In [34]: 1 agent.chat('Plot a histogram to show different range Speed of pokemon Name use color red')
```



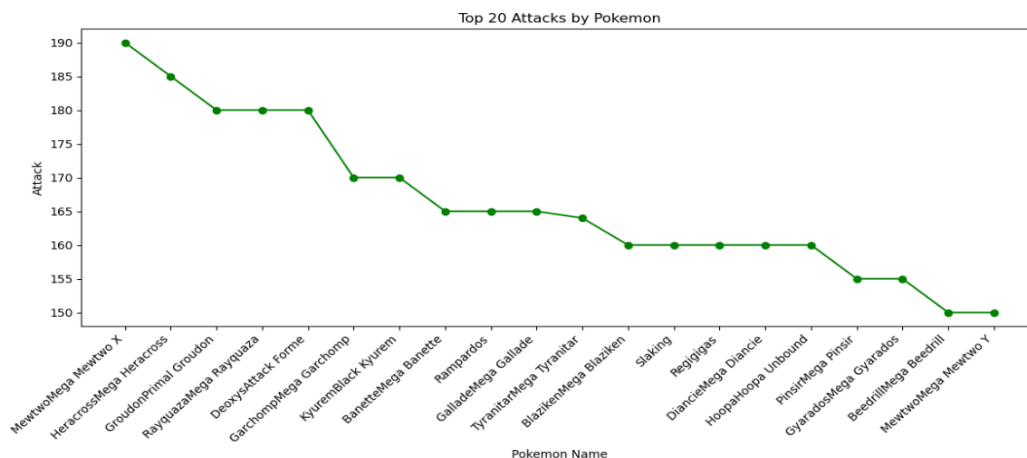
- **Plotting a Line Graph**

We're asking the Agent to create a line graph showing the top 20 Pokémon attacks, using green color for the line. The graph will display how these attacks rank, with the x-axis properly aligned for clarity. Please refer to Figure 6 for the visual representation. This will help us easily understand the ranking of the top 20 attacks and their distribution.

**Figure 6:**  
Line Plot

```
In [38]: 1 agent.chat('Plot a line graph to show top 20 attacks done By pokemon use color green, align the x axis properly')
```

```
Out[38]: 'C:/Users/karti/exports/charts/temp_chart.png'
```



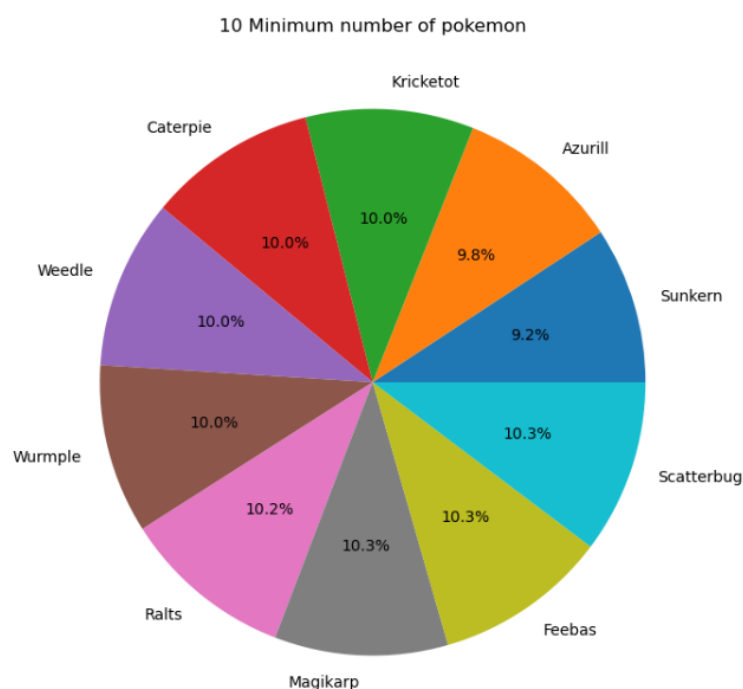
## PANDAS AI

- **Plotting a Pie Chart**

We're asking the Agent to create a pie chart showing the totals for the 10 Pokémon with the minimum total. The chart will have the title "10 Minimum Number of Pokémon" and will visually represent the proportion of each Pokémon's total. Please refer to Figure 7 for the visual representation. This will help us understand the distribution of the smallest totals among the Pokémon.

**Figure 7:**  
Pie Chart

```
In [48]: 1 agent.chat('Plot a pie chart to show 10 min totals of the pokemon Name with Title "10 Minimum number of pokemon"')
Out[48]: 'C:/Users/karti/exports/charts/temp_chart.png'
```



- **Plotting a Scatter Plot**

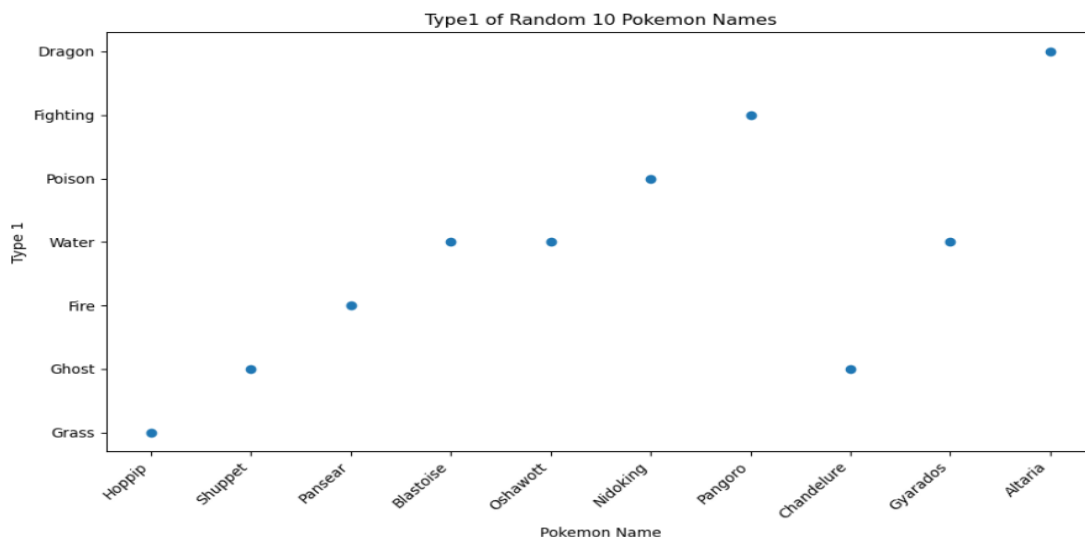
We're asking the Agent to create a scatter plot with Pokémon names on the x-axis and their Type1 on the y-axis, using a random selection of 10 Pokémon. The scatter plot will show how the primary types of these Pokémon are distributed. We want the x-axis to be properly aligned for clarity. This will help us visually compare the primary types of the selected Pokémon. Please refer to Figure 8 for the visual representation.

## PANDAS AI

**Figure 8:**  
Scatter Plot

```
In [71]: 1 agent.chat
        2 ('Scatter plot to show the Type1 on y axis of random 10 pokemon name on x axis,on same graph,align the x axis properly')

Out[71]: 'C:/Users/karti/exports/charts/temp_chart.png'
```

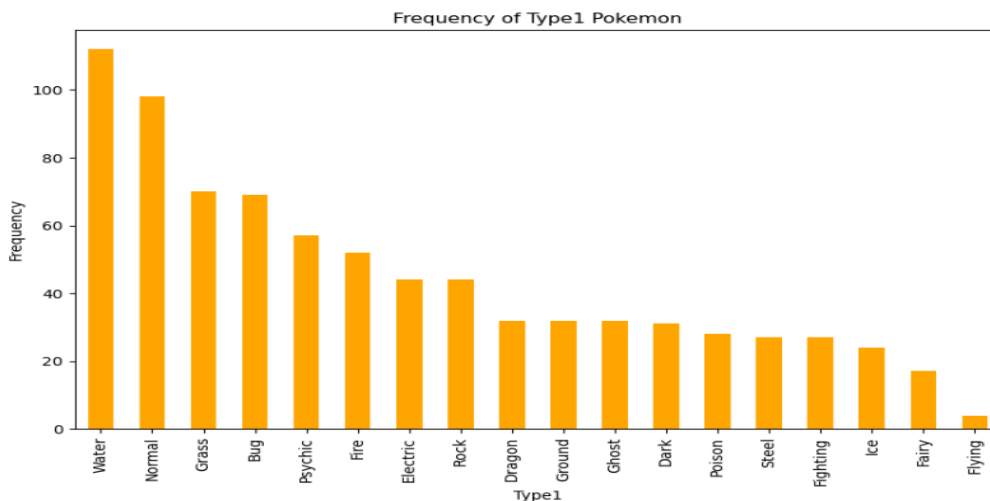


- **Plotting a Bar Graph**

We're asking the Agent to create a plot that shows the frequency of each Type1 Pokémon, using orange color for the bars or lines. This plot will visually display how often each Pokémon type appears in the dataset. The orange color will make it easy to differentiate the types. This helps us quickly understand the distribution of Pokémon types. If you notice the agent will also correct our typo errors for “frequently” to “frequency”. Please refer Figure 9 for the representation.

**Figure 9:**  
Bar Plot

```
In [76]: 1 agent.chat('Plot to show the frequency of Type1 pokemon with color orange')
```



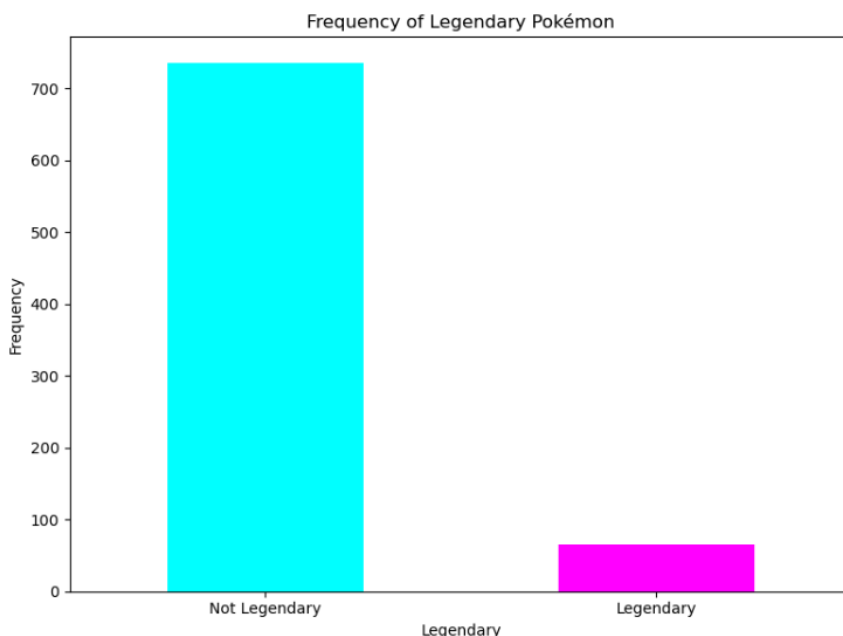
## PANDAS AI

- **Plotting Legendary Pokémon**

We're asking the Agent to create a graph showing the frequency of Legendary Pokémon, using cyan and magenta colors. This graph(Figure 10) will display how often Legendary Pokémon appear in the dataset. The use of cyan and magenta will make the graph visually distinctive. This helps us understand the distribution of Legendary Pokémon more clearly.

**Figure 10:**  
Legendary Plot

```
In [3]: 1 agent.chat('Plot graph to get the frequency of the Legendary in color in cyan and magenta colors')  
Out[3]: 'C:/Users/karti/exports/charts/temp_chart.png'
```



## 5. Conclusion

The Pandas AI Agent makes analyzing data much easier by letting us create different types of charts just by asking questions. We can generate histograms, pie charts, scatter plots, and more without writing any code or dealing with complicated syntax. This convenience allows us to quickly explore and understand our Pokémon dataset, revealing insights about Pokémon types, stats, and distributions. By simplifying the process, Pandas AI makes data analysis more accessible and efficient, enabling us to focus more on interpreting results rather than on technical details. Overall, Pandas AI simplifies data analysis, making it more accessible and straightforward for everyone.

### References

Pandas AI. (n.d.). *Introduction to Pandas AI*. Retrieved from  
<https://docs.pandas-ai.com/intro>

Jupyter Notebook. command line code. *Assignment\_4.ipynb*,  
[https://github.com/ShindeShwetaK/Panda-AI/blob/main/Pandas\\_AI.ipynb](https://github.com/ShindeShwetaK/Panda-AI/blob/main/Pandas_AI.ipynb)