POKEMON

analysis

Chelsea Ayu Adhigiadany

ABOUT ME

I am an undergraduate student at Data Science UPN Veteran Jawa Timur. I am currently in my 6th semester and doing an internship at PT Semen Indonesia (Persero) Tbk as a Mining Data Scientist. I have interests in data scientist, data analyst, and data engineer.

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DESCRIPTION OF THE PROBLEM TO BE DISCUSSED

The problem?

We must find insights from existing pokemon data.

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DATA UNDERSTANDING

Variable Name	Description	Data Type
#	Number ID in the Pokedex	Numeric
Name	Name of the Pokemon	String
Type 1	Primary type	Categorical
Type 2	Second type	Categorical
Total	Sum of all the base stats (Health point, attack, defense, special attack, special defense, and speed)	Numeric
HP	Base health points	Numeric
Attack	Base attack	Numeric

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DATA UNDERSTANDING

Variable Name	Description	Data Type
Defense	Base defense	Numeric
Sp Atk	Base special attack	Numeric
Sp Def	Base special defense	Numeric
Speed	Base speed	Numeric
Generation	Number of the generation when the pokemon was introduced	Numeric
Legendary	Boolean that indicated if the pokemon is legendary or not	Boolean

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INSIGHT FROM THE DATA

There are 386 Pokemon that don't have a second type

```
Name       0
type_1     0
type_2   386
```

there are 18 types of pokemon, namely water, normal, grass, insect, psychic, fire, electricity, stone, dragon, earth, ghost, dark, poison, steel, fight, ice, fairy, and flying.

```
type_1
Water       112
Normal       98
Grass        70
Bug          69
Psychic      57
Fire         52
Electric     44
Rock         44
Dragon       32
Ground       32
Ghost        32
Dark         31
Poison       28
Steel        27
Fighting     27
Ice          24
Fairy        17
Flying        4
```

```
type_2
Flying      97
Ground      35
Poison      34
Psychic     33
Fighting    26
Grass       25
Fairy       23
Steel       22
Dark        20
Dragon      18
Water       14
Ghost       14
Ice         14
Rock        14
Fire        12
Electric     6
Normal       4
Bug          3
```

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Pokemon that don't has a secondary type are mostly classified as non-legendary Pokemon.

Pokemon that does not have a secondary type based on its legendary
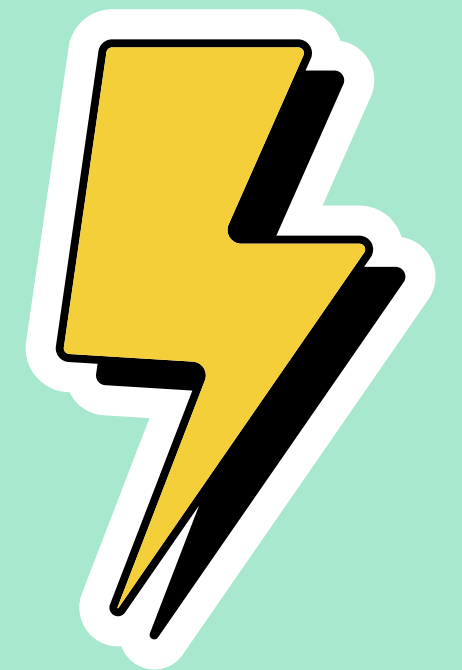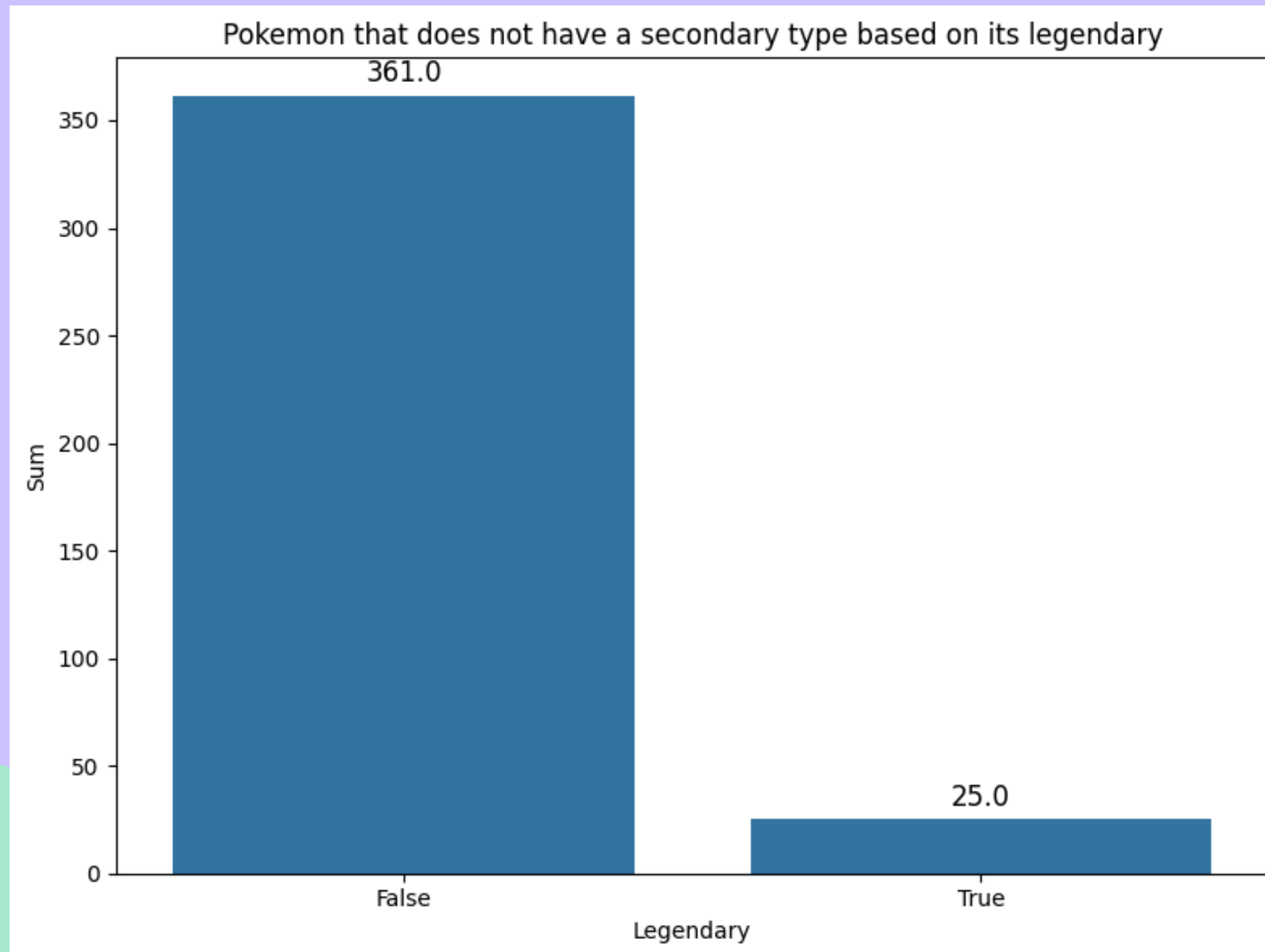
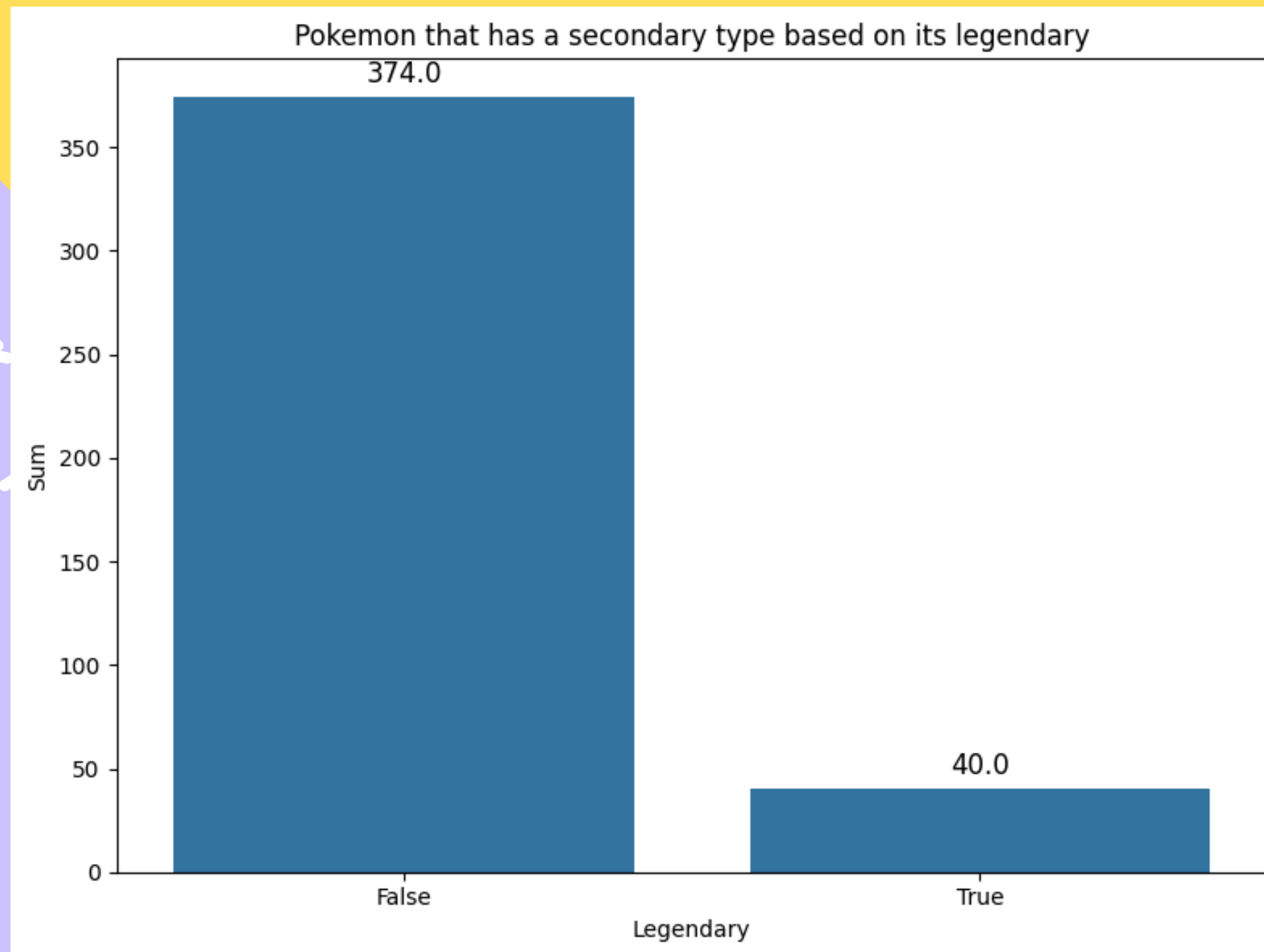# INSIGHT FROM THE DATA

Pokemon that has a secondary type are mostly classified as non-legendary Pokemon too.

Pokemon that has a secondary type based on its legendary

374.0

350

300

250

Sum 200

150

100

50

40.0

0

False   True

Legendary

!MAIN POINT!

The majority of the data are not legendary pokemon

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INSIGHT FROM THE DATA

Correlation between Total, HP, attack, defense, sp_atk, sp_def, speed, and legendary is positive. It means that if one of them increases, the other variable will also increase.

Heatmap Correlation

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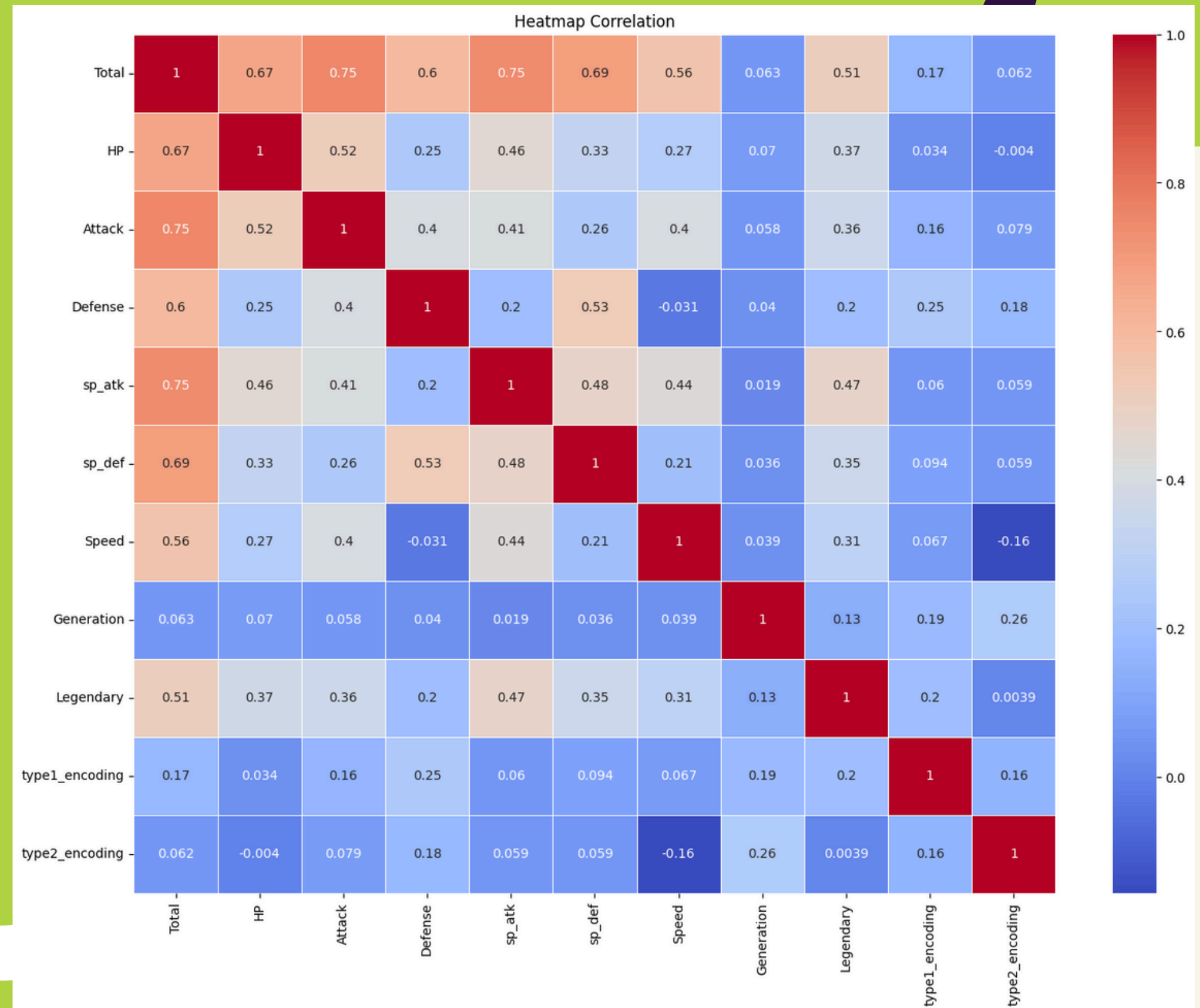
Number of Pokemon by First Type
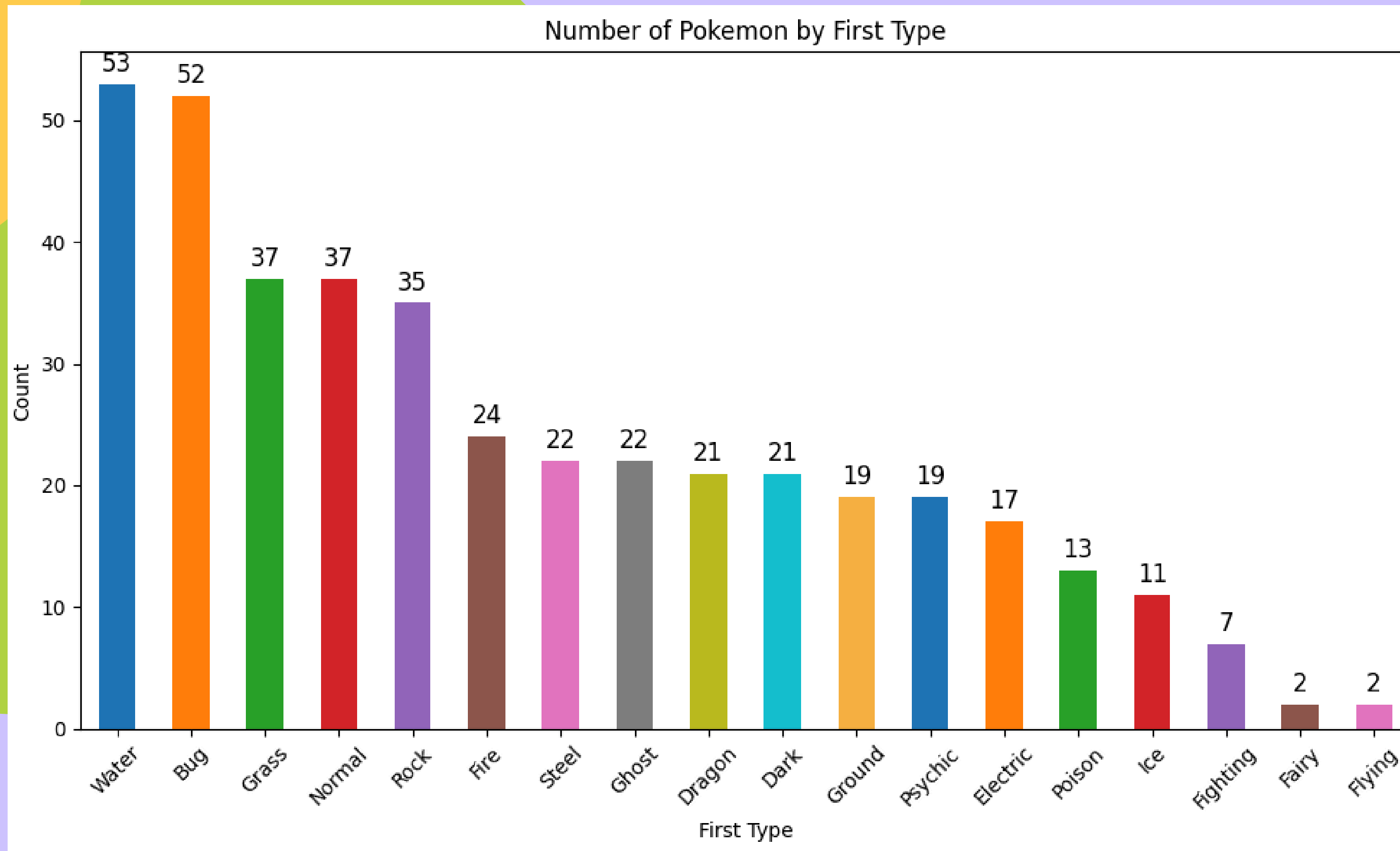
Referring to the picture on the side, **water** as the most first type of Pokemon and **flying** as the least first type of Pokemon.
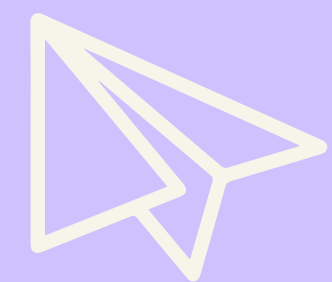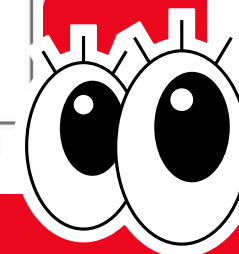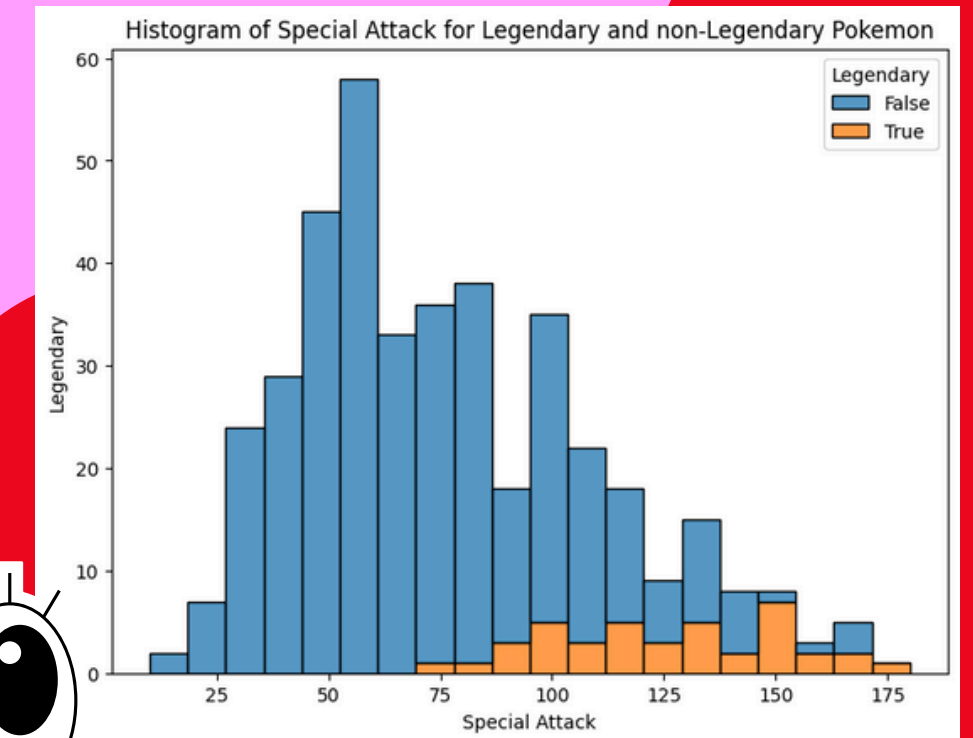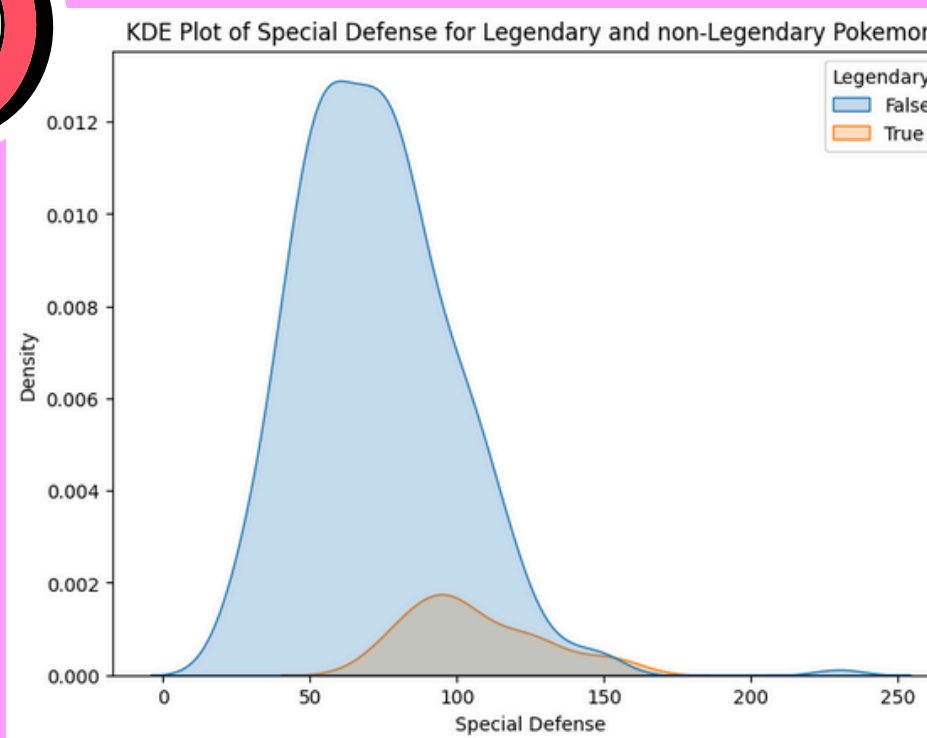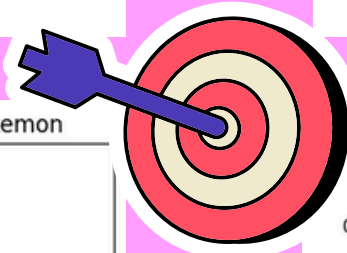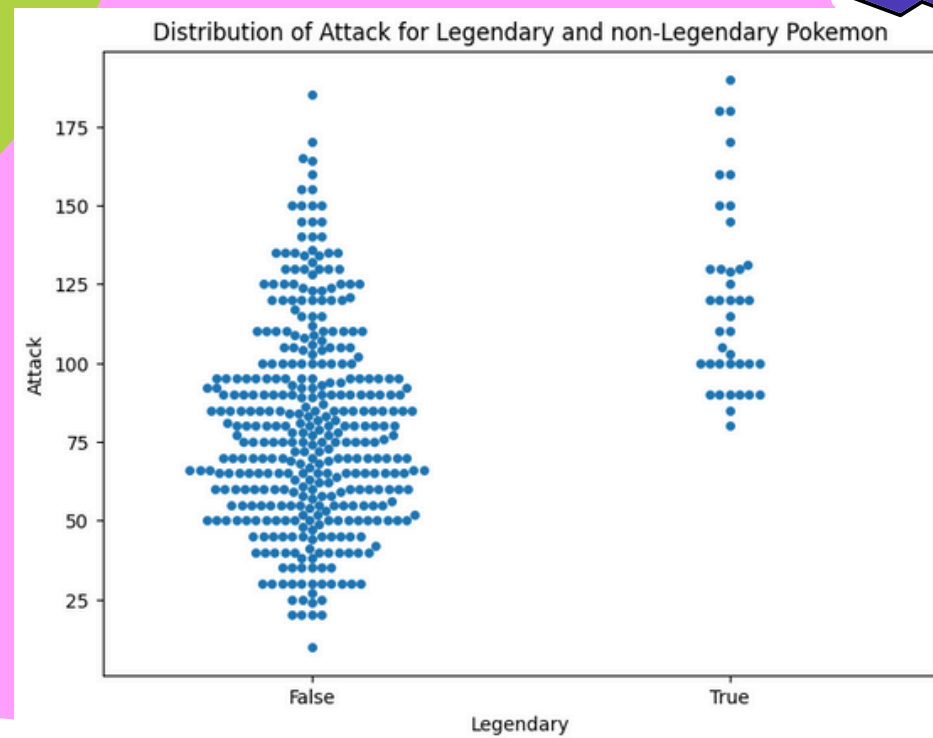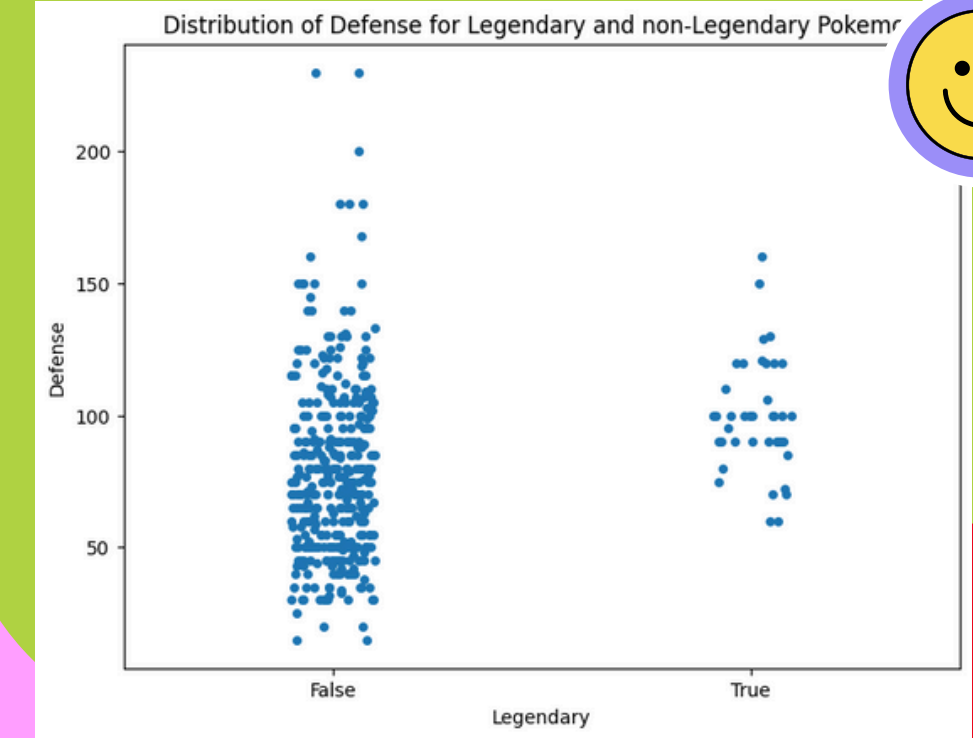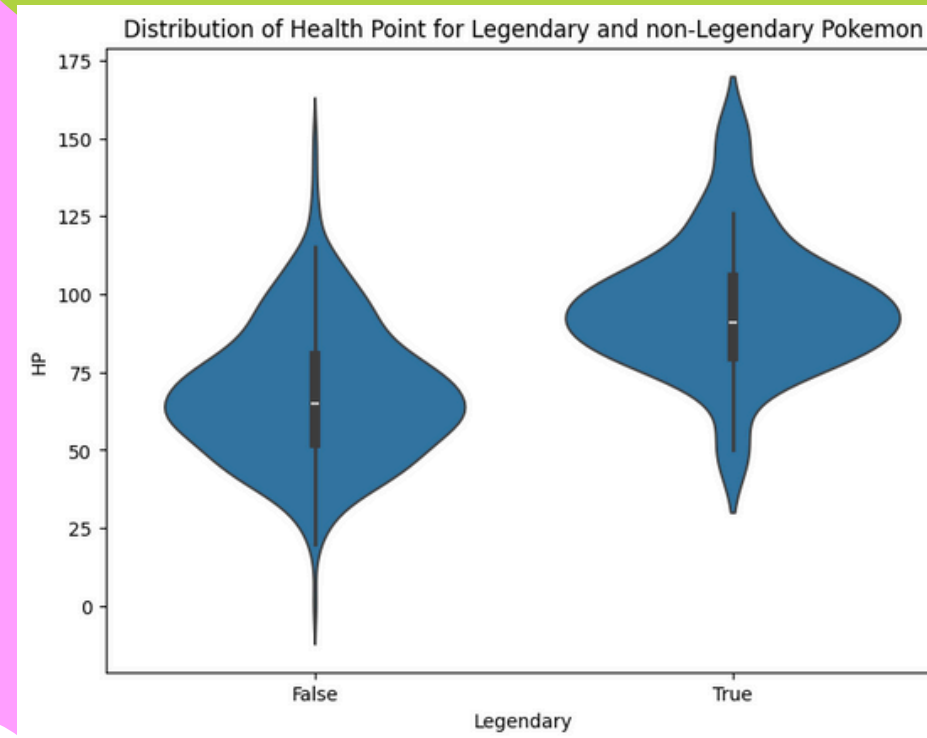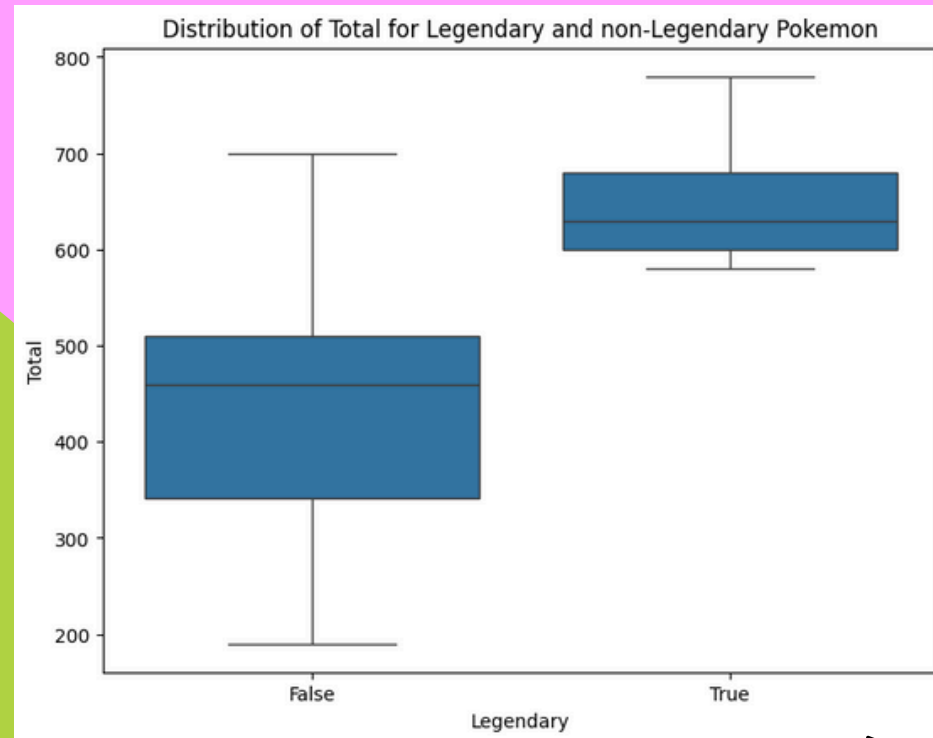
INSIGHT FROM THE DATA

Number of Pokemon by Secondary Type
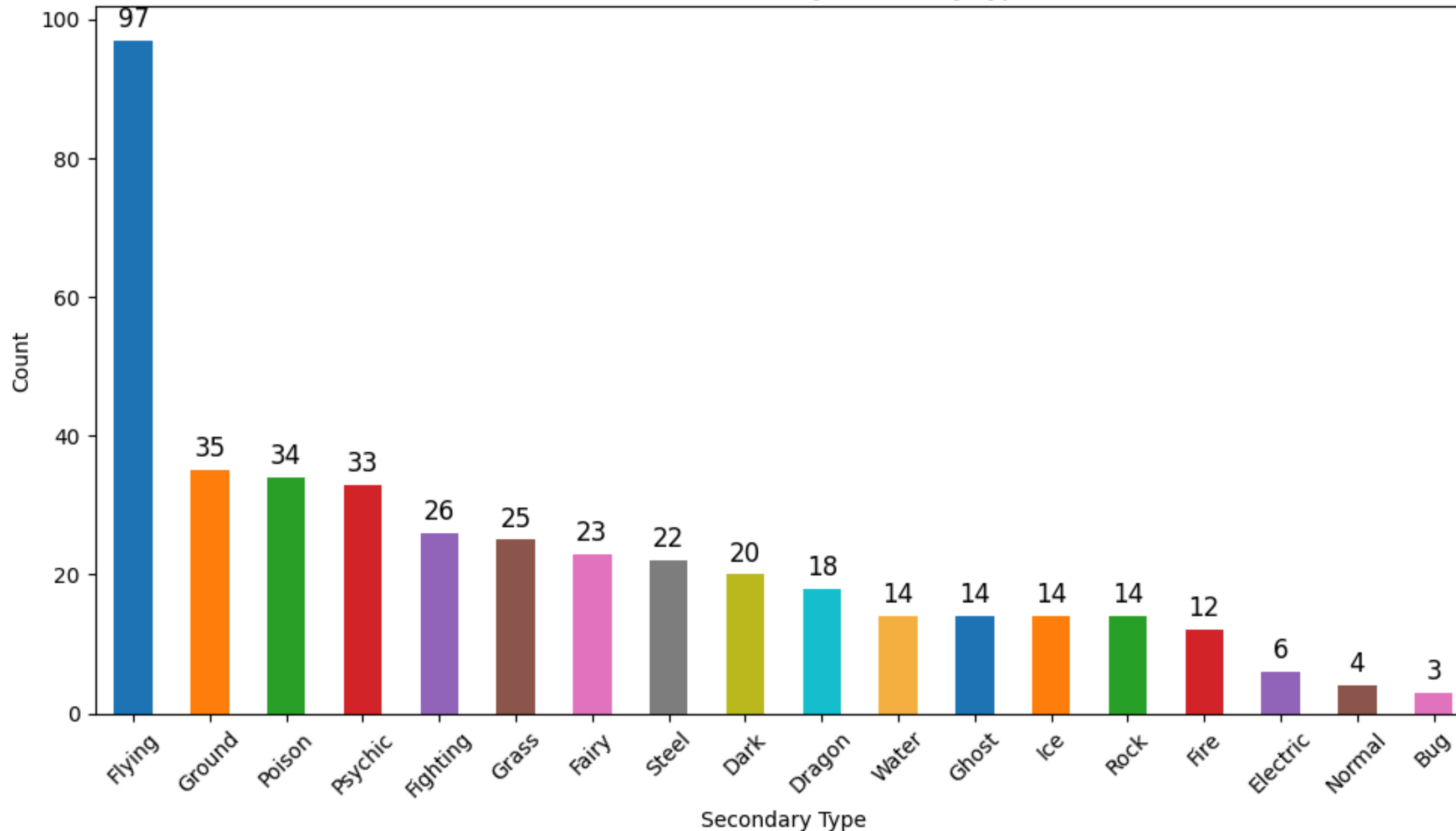
Referring to the picture on the side, **flying** as the most secondary type of Pokemon and **bug** as the least secondary type of Pokemon.

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INSIGHT FROM THE DATA

Pokemon that enter the legendary cluster are pokemon that have high Health
Point, Total, Defense, Attack, Special Attack, and Special Defense values.

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INSIGHT FROM THE DATA
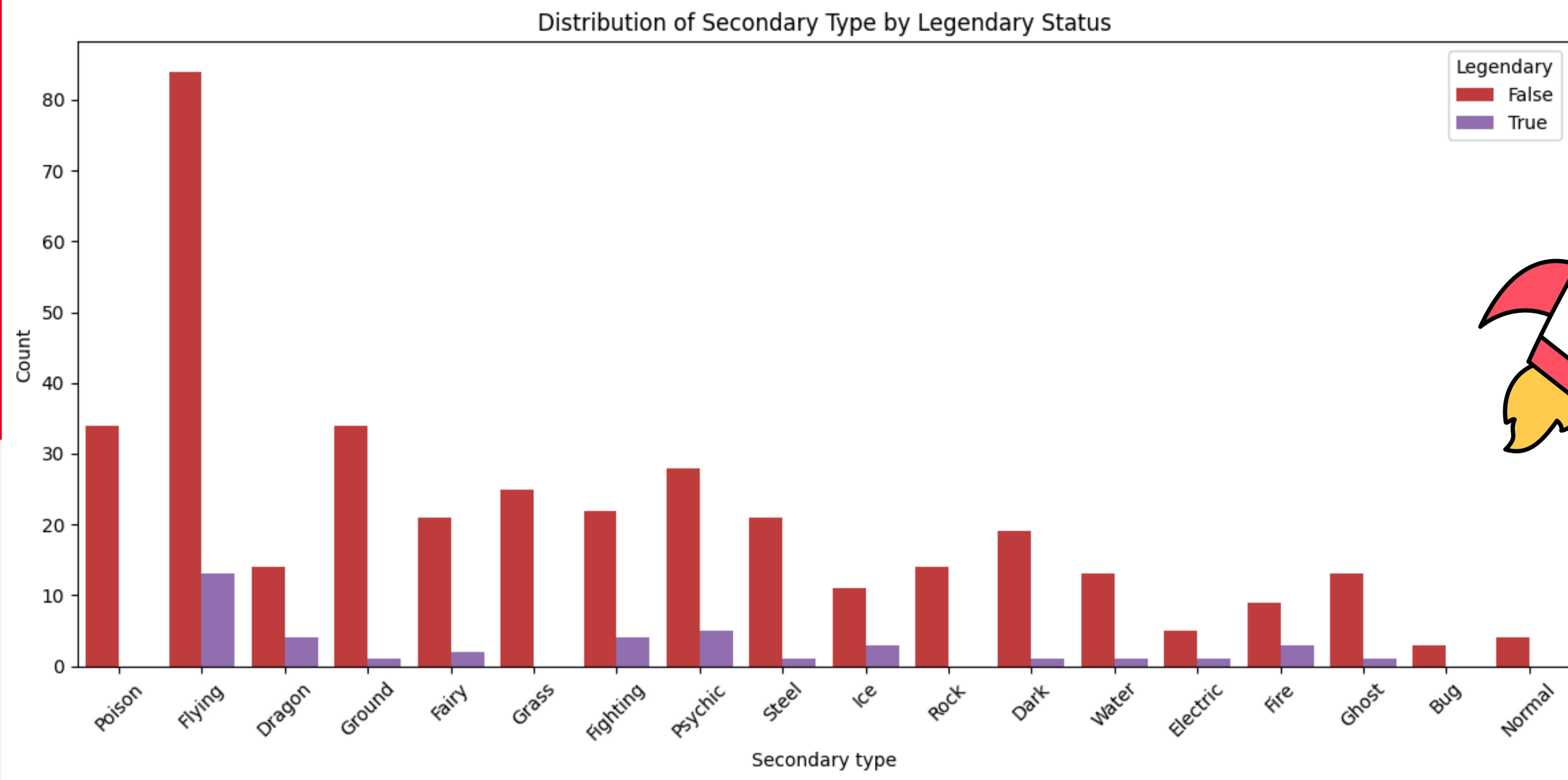

Distribution of First Type by Legendary Status
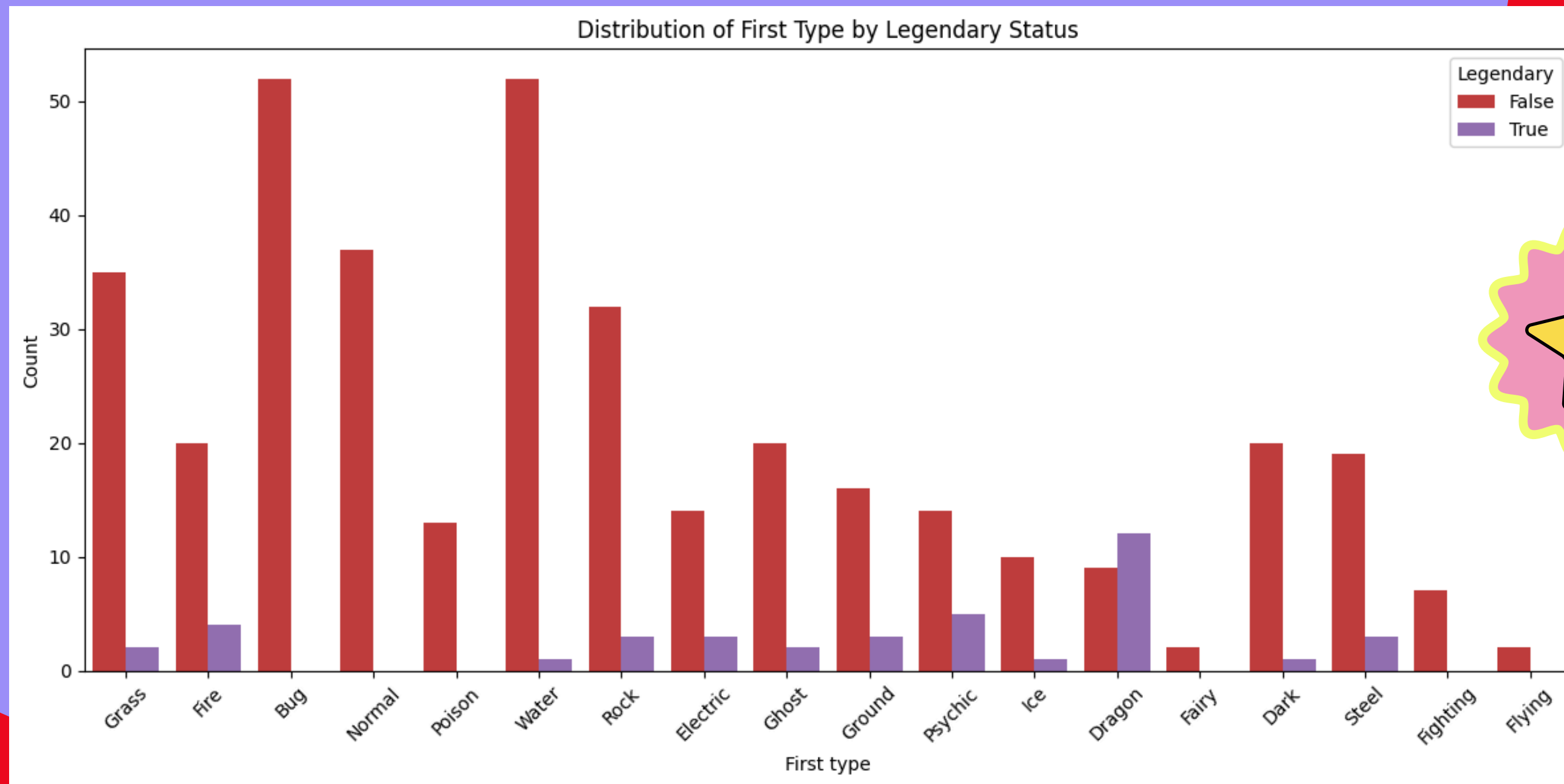
!MAIN POINT!
Dragon is the most first type of pokemon that has legendary cluster.

The First Type of Pokemon that include the legendary cluster are Grass, Fire, Water, Rock, Electric, Ghost, Ground, Psychic, Ice, Dragon, Dark, and Steel.

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INSIGHT FROM THE DATA

Distribution of Secondary Type by Legendary Status

!MAIN POINT!
Flying is the most secondary type of pokemon that has legendary cluster.

The Secondary Type of Pokemon that include the legendary cluster are Flying, Dragon, Ground. fairy, Fighting, Psycic, Steel, Ice, Dark, Water, Electric, Fire, and Ghost.

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THANK YOU

I hope you can get useful knowledge
from this presentation. Good luck !

Chelsea Ayu Adhigiadany