Pokemon Data Analysis

The pokemon data consist of various varieties of pokemon and their abilities and power.

Here is this project, we are going to study each and every pokemon in detail to understand their features and deepen our knowledge in the field of analysis and visualization.

Agenda

1. Catching Grass Pokémon

2. Catching Fire Pokémon

3. Catching water Pokémon

Catching basically means from the entire dataset extracting grass, fire, and water type Pokémon and understanding their features in detail.

steps

1. first load the dataset

2. importing essential libraries like ggplot(),dplyr()

3. to know the information about how many rows and columns - nrow(),ncol()

4.to check missing values-is.na()..gives true or false values also sum(is.na(pokemon))

5. understanding numerical and categorical values.

```
 [ reached getOption("max.print") -- omitted 777 rows ]
> table(pokemon$type1)

    bug     dark   dragon electric    fairy fighting     fire   flying    ghost    grass   ground      ice   normal   poison
     72       29       27       39       18       28       52        3       27       78       32       23      105       32
psychic     rock    steel    water
     53       45       24      114
> table(pokemon$generation)

  1   2   3   4   5   6   7
151 100 135 107 156  72  80
>
```

6. to change the column name

```
> colnames(pokemon)[colnames(pokemon)=="type1"]<- "primary_type"
> view(pokemon)
Error in view(pokemon) : could not find function "view"
> View(pokemon)
> colnames(pokemon)[colnames(pokemon)=="type2"]<- "Secondary_type"
> View(pokemon)
```

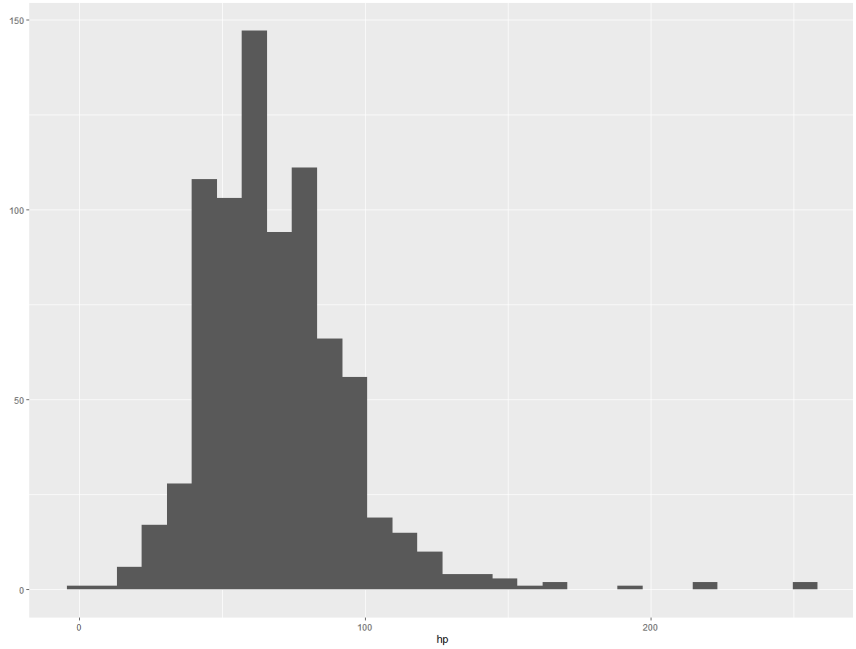
7. Extracting the Grass-type pokemon from the whole dataset.

min(grass_pokemon$speed) = 10

max(grass_pokemon$speed) = 145

mean(grass_pokemon$sp_attack) = 74.32

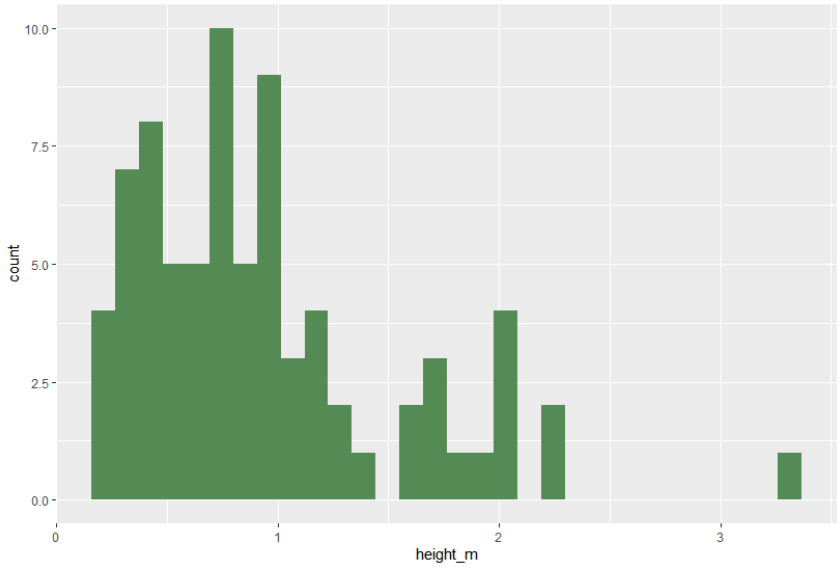
mean(grass_pokemon$sp_defense)=69.23



from this, we can say that they are around 140 pokemon whose hp is around 55 to 60

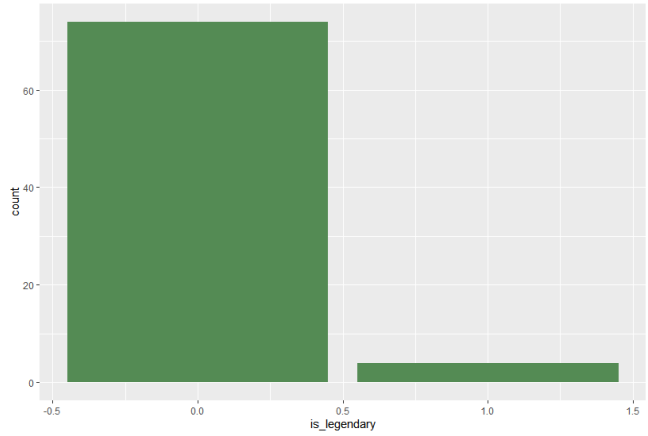
and very few pokemon whose hp is more than 200.

And 50 to 60 pokemon whose hp is around 100.



The height I vary from 0 to 3.5 meters

Most of the grass pokemon's height is less than 1 meter.



8. Extracting the fire type of pokemon

There are only 52 entries for fire-type pokemon. So we can say that we are dealing with imbalanced data

min(fire_pokemon$speed)= 20

> max(fire_pokemon$speed)= 126

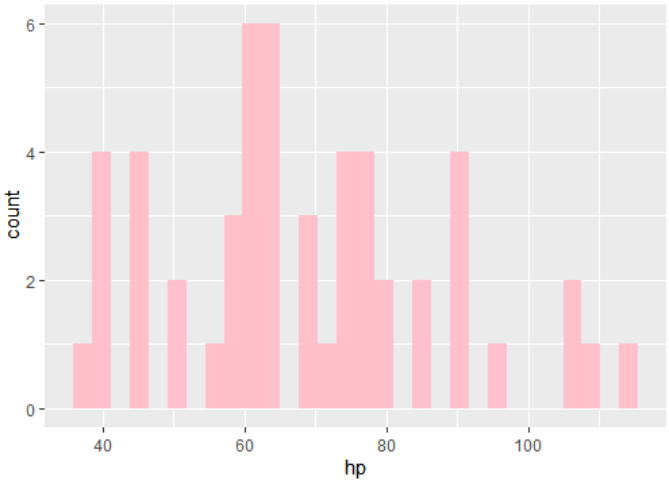
> max(fire_pokemon$sp_attack)= 159

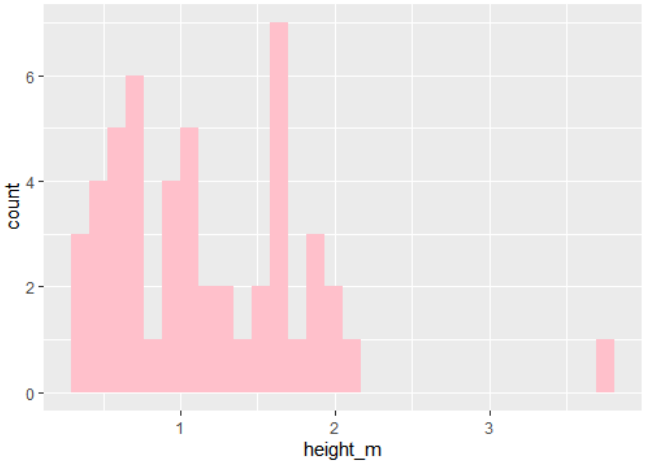
> min(fire_pokemon$sp_attack)=15

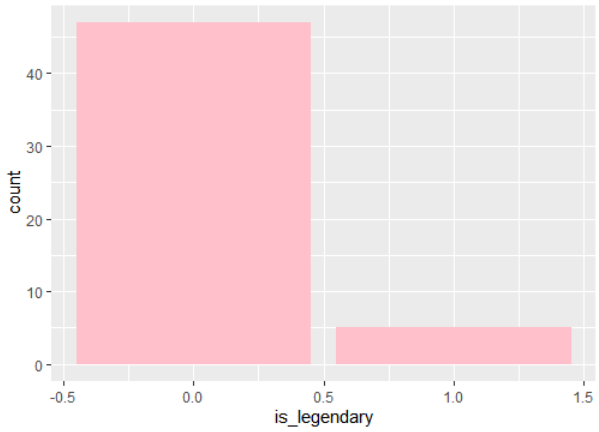
> mean(fire_pokemon$sp_attack)= 87.73077

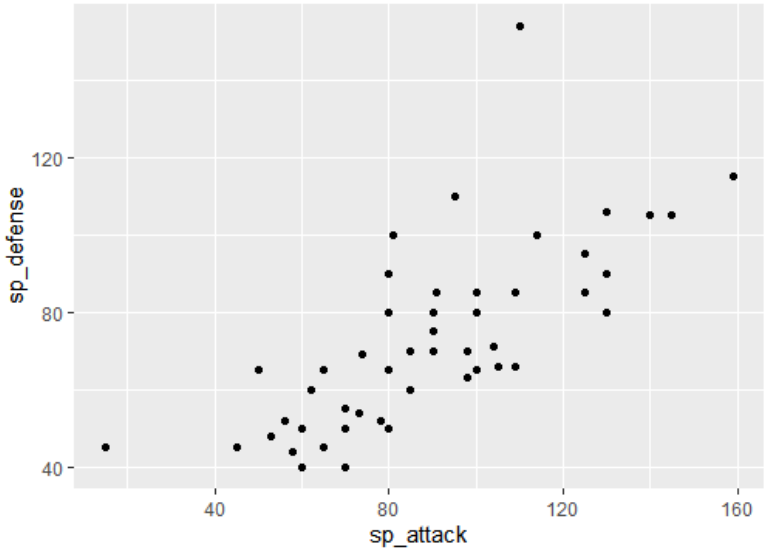
> mean(fire_pokemon$sp_defense)= 71.53846

Grass pokemon has higher self-defense data than the fire pokemon









If the special attack of fire pokemon increases the special defence also increases. There is only 1 pokemon who has the highest defence the value would be around 135 and the sp_attack value would be 110

There is a linear relationship between sp_attack and sp_defense.

9. Extracting and understanding of water type pokemon

There are total 114 entries of water type pokemon from the entire datasets.

max(water_pokemon$speed)= 132

> min(water_pokemon$speed)= 5

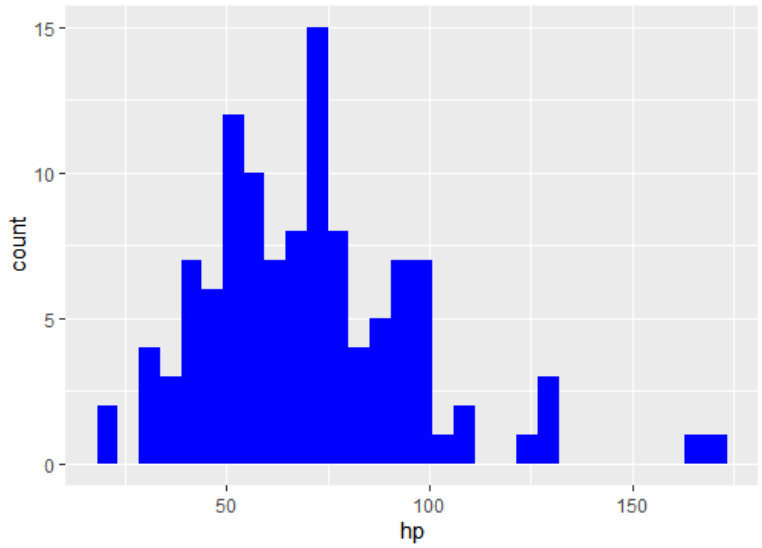
> mean(water_pokemon$sp_attack)= 74.0614

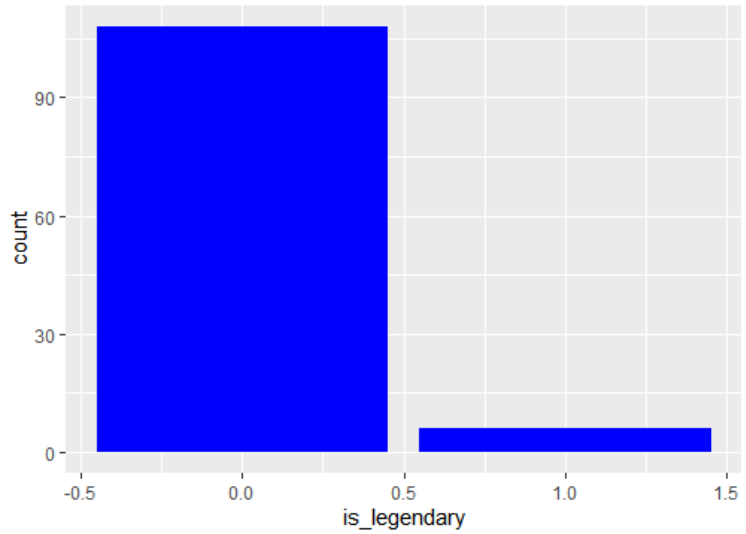
> mean(water_pokemon$sp_defense)=71.79825

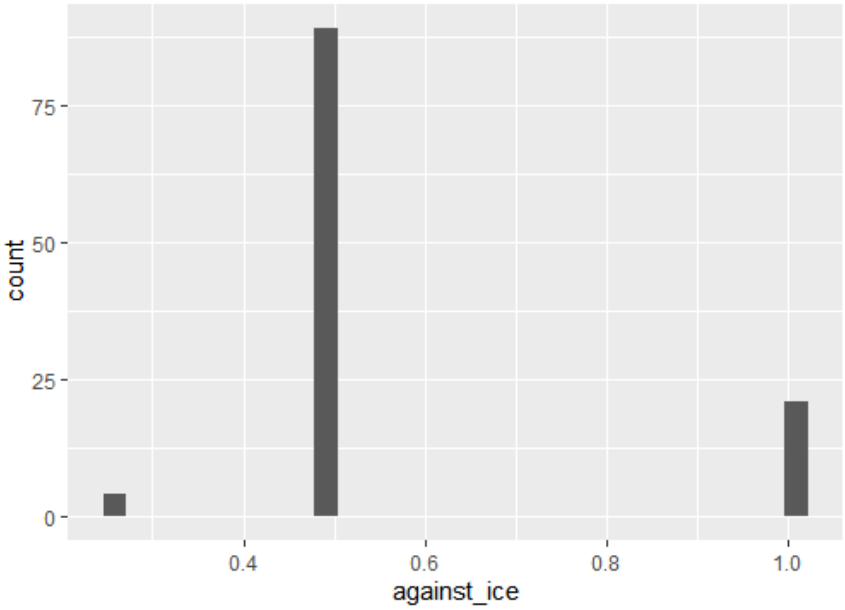
> min(water_pokemon$sp_attack)= 10

> max(water_pokemon$sp_attack)= 180

Looking at the minimum and maximum speed of the water-type pokemon, they are slow compared to grass and fire-type pokemon.







There are only 80 odd water pokemon, and their rating against ice is around 0.5.