Data Visualization

Group 9
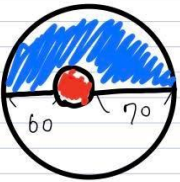
B074020017 杜俞萱　B074020018 張芳瑜

B074020048 黃于千　B074020056 廖仕雅

Why did we choose the Pokémon topic?

- Because the datasets for Pokémon are more comprehensive.

- We're more interested in the Pokémon topic.

- We can maybe extend to more interesting questions.

Graph 1
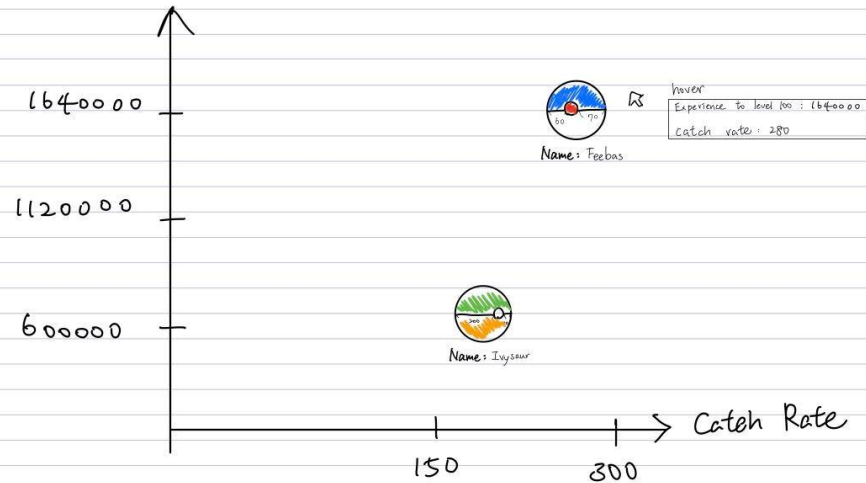
Graph 1 - question

- The distribution of Legendary in type1, type2?

- If the Pokémon is a legendary, will it require more experience points?

- What is the relationship between Type 2 A-type Pokémon and Experience to level 100 and Catch Rate?(Which area is it mainly distributed in?)

- Among the Pokémon in the "selection list", which Type 1 with high Experience to level 100 and Catch rate?

- Pokémon with higher experience to level 100 have higher Catch rate?

- Among the Pokémon in the "selection list", what is the relationship between Type2 with Legendary, Experience to level 100, and Catch rate? (Where are the coordinates?)

- Among the Pokémon in the "selection list", which Type1 mainly has a higher Catch rate?

Graph 1 - critique

pros :

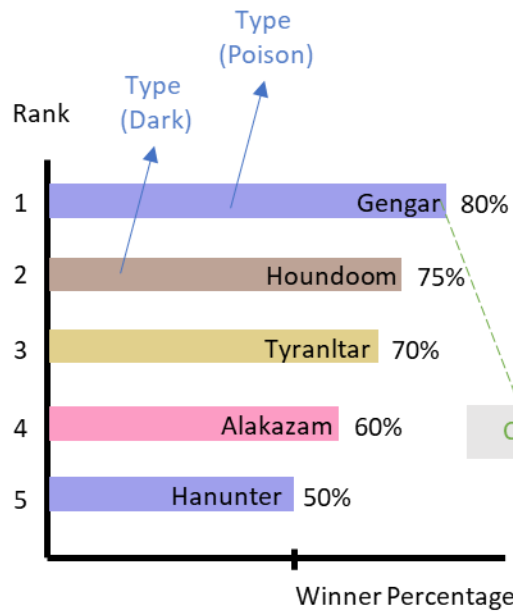- We can easily compare between ATT and DEF.
- Very interesting design to use Pokéball to visualize the Pokémon which sticks to the Pokémon theme.

cons :

- The Pokéball might overlap on the Experience to level 100/Catch Rate graph when we plot all the Pokémon.
- It left out some stats like Spd, Spa and Spd.
- The length of the line is adjusted according to the scale, not the actual value.

Graph 2

Rank

Type (Dark)

Type (Poison)

Rank		Winner Percentage
1	Gengar	80%
2	Houndoom	75%
3	Tyranltar	70%
4	Alakazam	60%
5	Hanunter	50%

Winner Percentage

Step 2 : Select the type you want to display.

Chose Type

Select ▽

Opponent

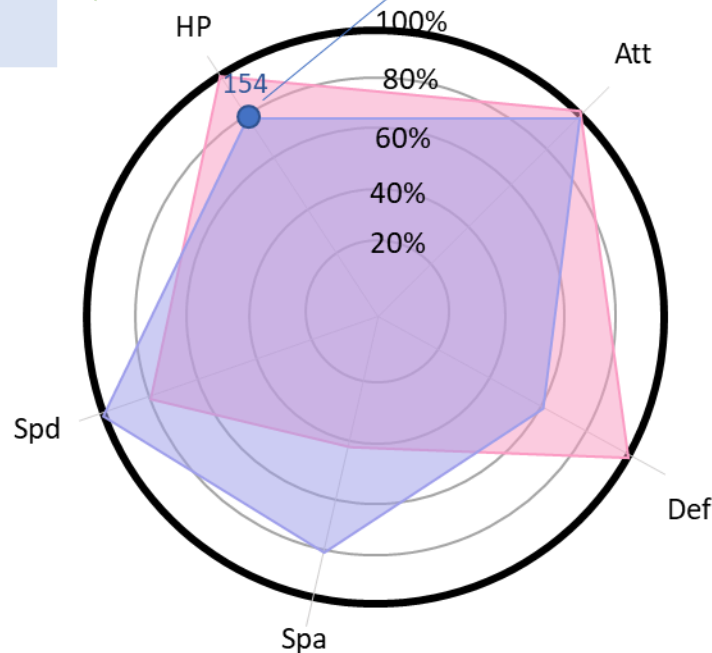Step 1 : Chose the opponent you want to battle.

Mewtwo

Type (Psychic)

Click

Step 3 : Select the Pokémon which you want to get more detail.

When mouse comes to here, screen will display the true number.

HP

100%

80%

60%

40%

20%

154

Att

Def

Spa

Spd

Gengar

Mewtwo

Graph 2 - question

- What is the stats of the Pokémon?
- What are the differences between the stats of the Pokémon?
- Which of the two Pokémon will win if they fight?
- If no type is selected, is it possible to see which type the top few with a higher winning rate belong to through rank sorting?

Graph 2 - critique

pros :

- Can easily compare the stats between both Pokémon through Radar plot.

- Winner percentage chart reflects a balance, a proportion, a sense of relevant scale (Tufte1 P.56)

- Radar chart displays an accessible complexity of detail

- Integrate text, chart, graphic, map into a coherent narrative (Tufte1 P.44)
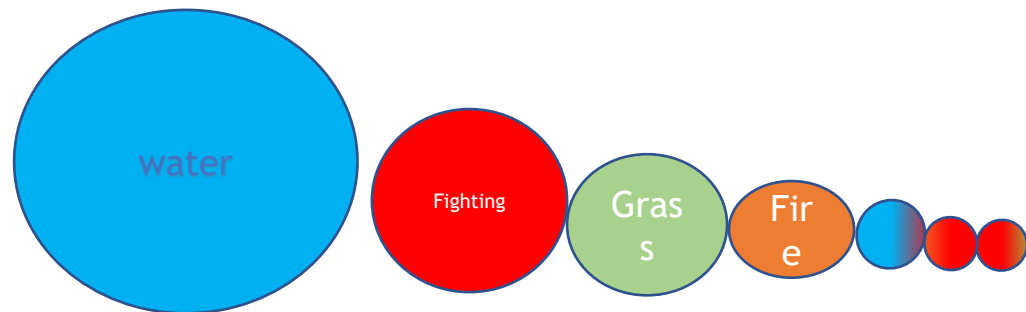
Graph 2 – critique

cons :

- If Pokémon are two types, it is difficult to determine its representative color.

- If the two Pokémon selected belong to the same type, it will be difficult to distinguish in the radar chart.

- Can only show the top ranked Pokémon instead of all.

- Because there are too many types in Pokémon, it is difficult for users to see immediately the type represented by the color.

Graph 3

- Size of circle represents the number of Pokémon.
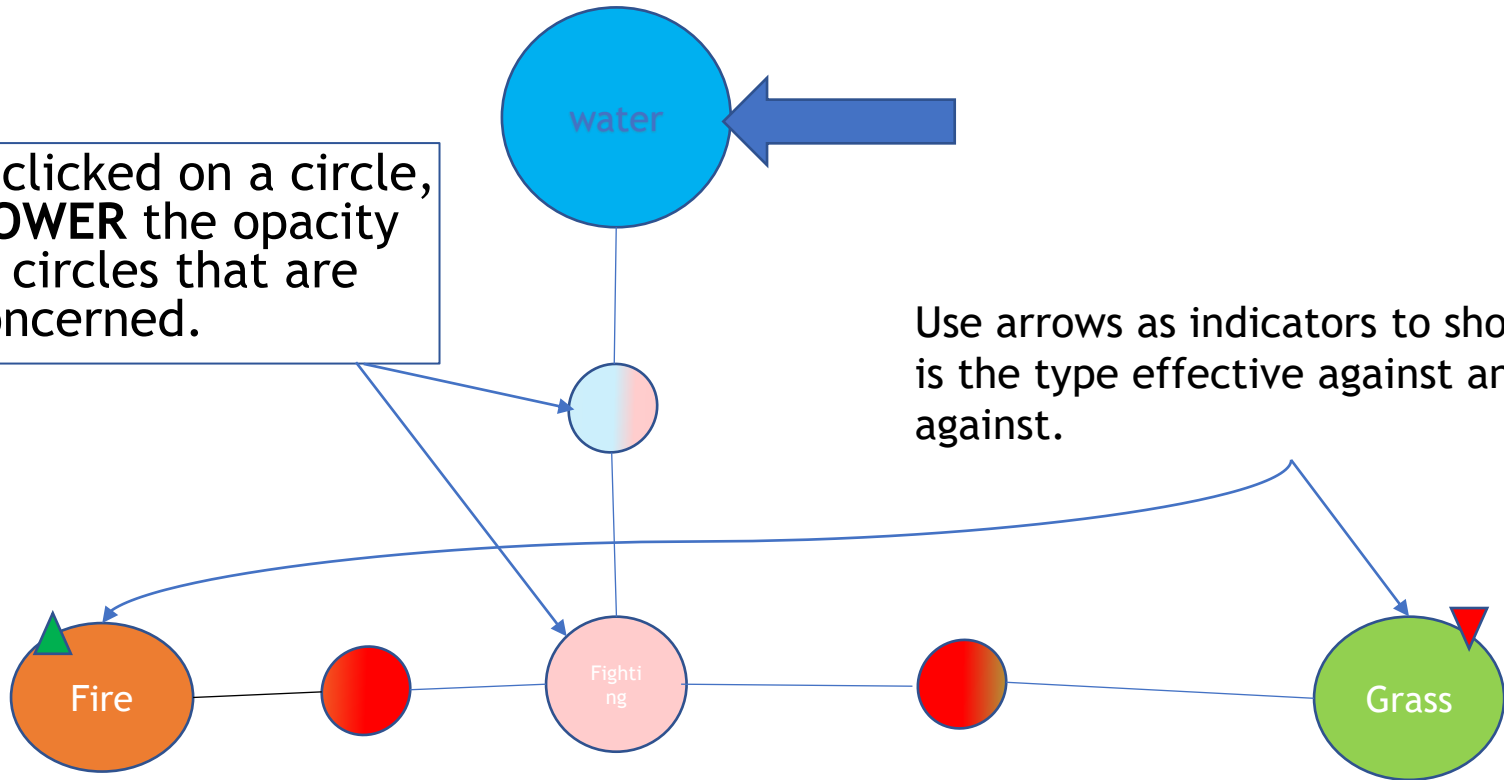
- The types are labeled on the circle.

water

water

Fire

Fighting

Grass
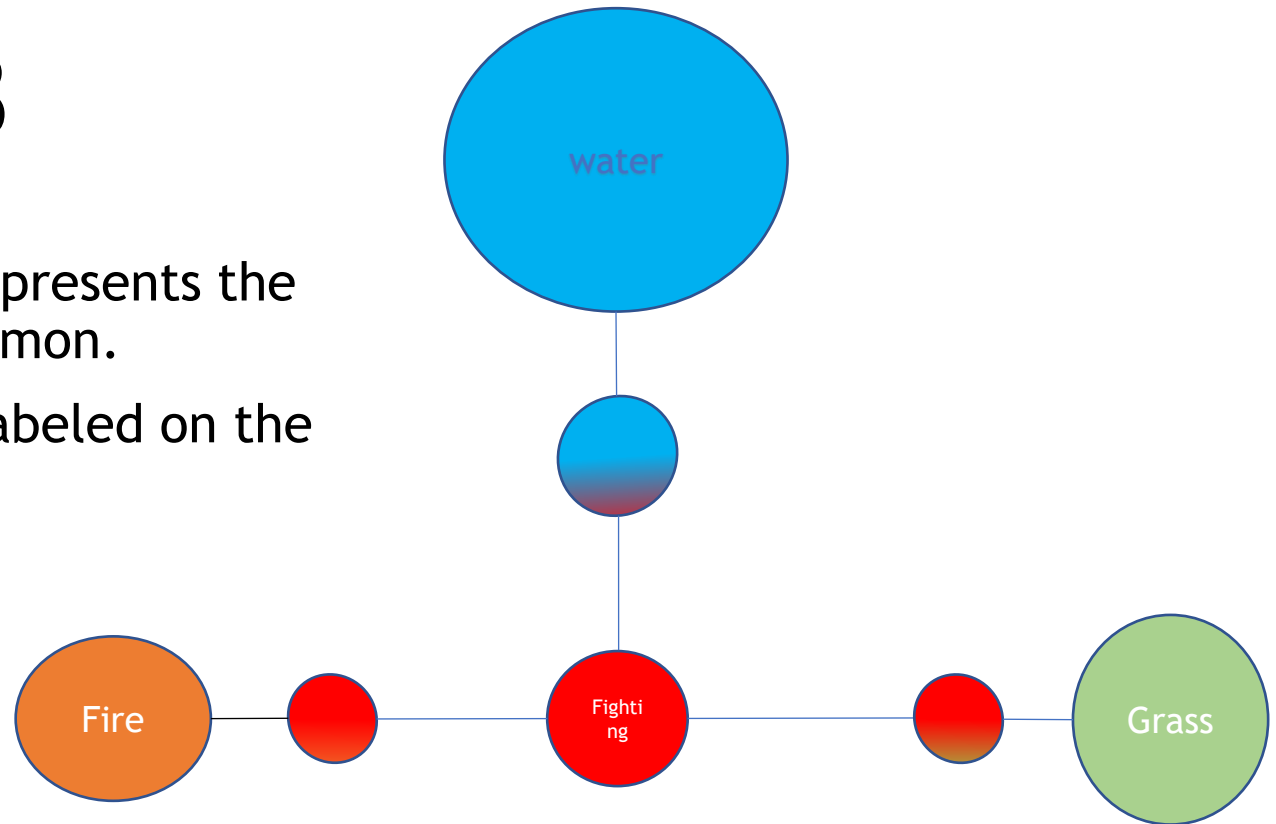
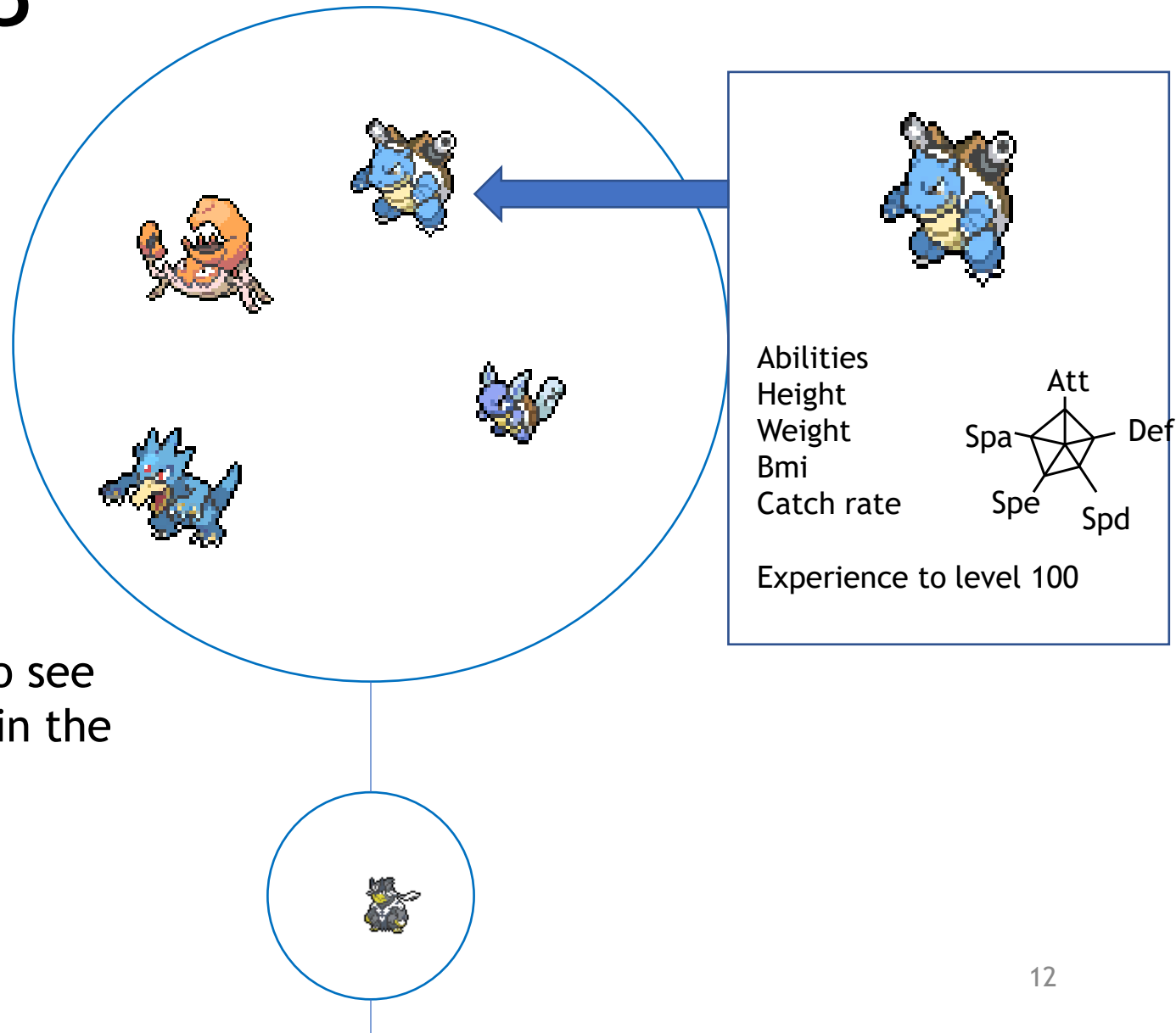- We can also sort the circles.

water

Fighting

Grass

Fire

Graph 3

- When clicked on a circle, it'll **LOWER** the opacity of the circles that are not concerned.

Use arrows as indicators to show which is the type effective against and weak against.

water

Fire

Fighting

Grass

Graph 3

- Hover over Pokémon will show its details.

Abilities
Height
Weight
Bmi
Catch rate

Spa   Att   Def
Spe   Spd

Experience to level 100

- We can zoom in to see what Pokémon is in the circle.

Graph 3

The statistics of currently selected type. When not selected it shows the whole population's statistic.

selected

water

Fire

Fighting

Grass
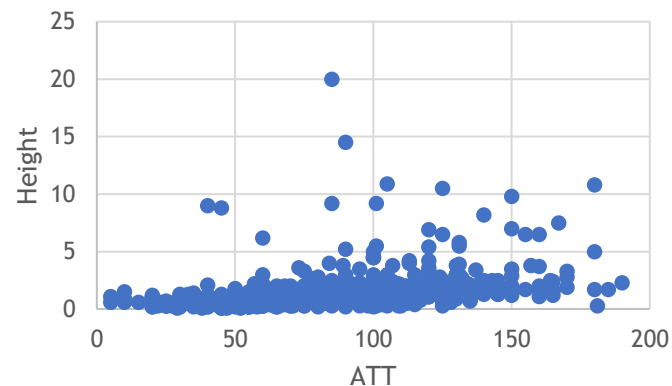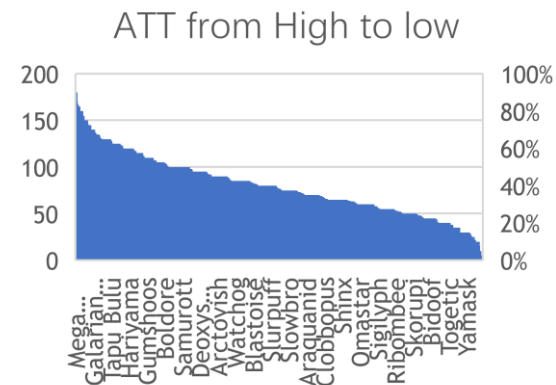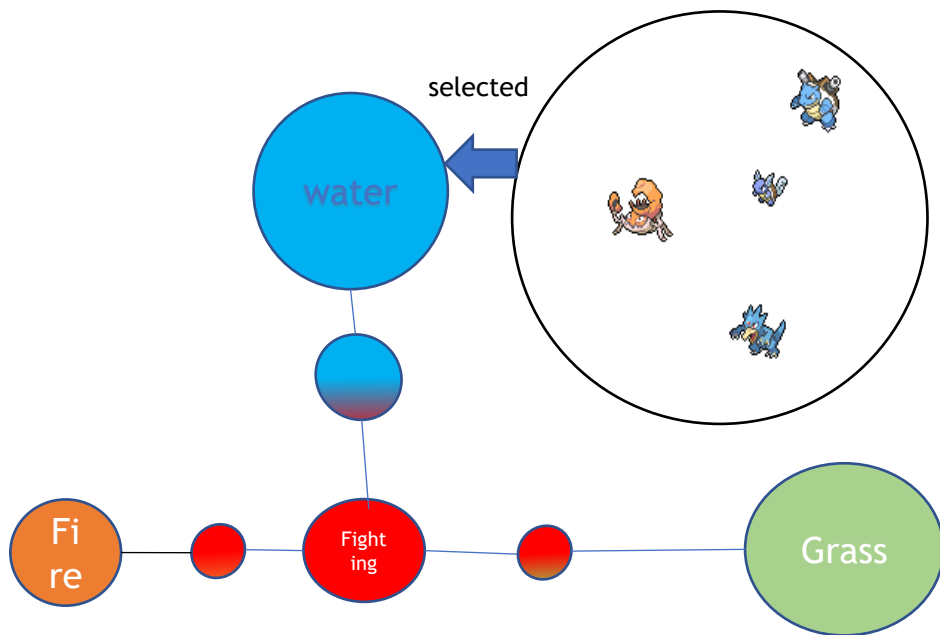
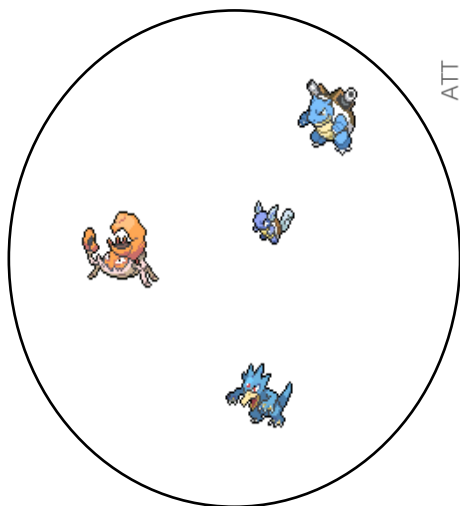ATT from High to low

Click to see more.

Show more

Graph 3

User can choose between stats to see if the stats are correlated .
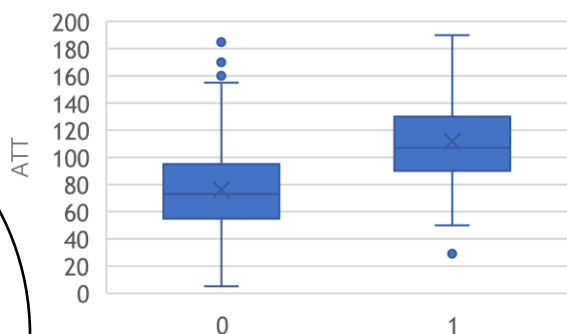
Height ▼   Att ▼

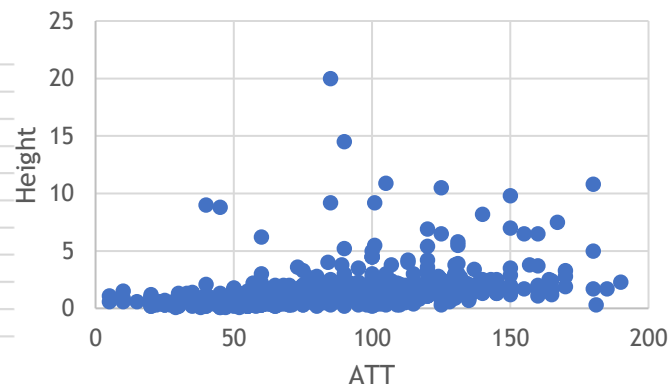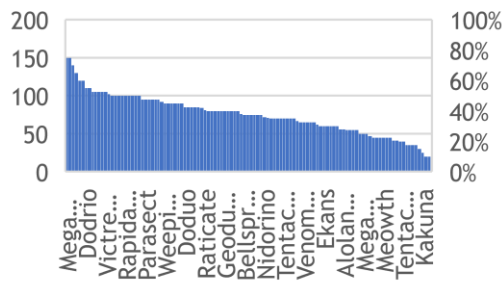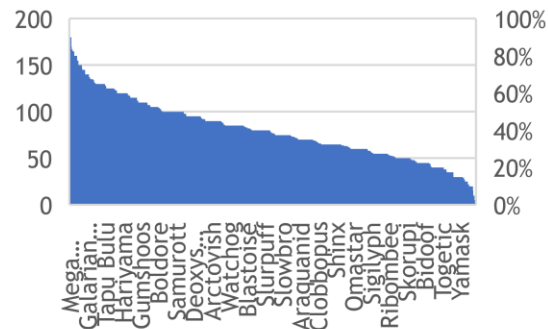This page shows more statistics for the type.

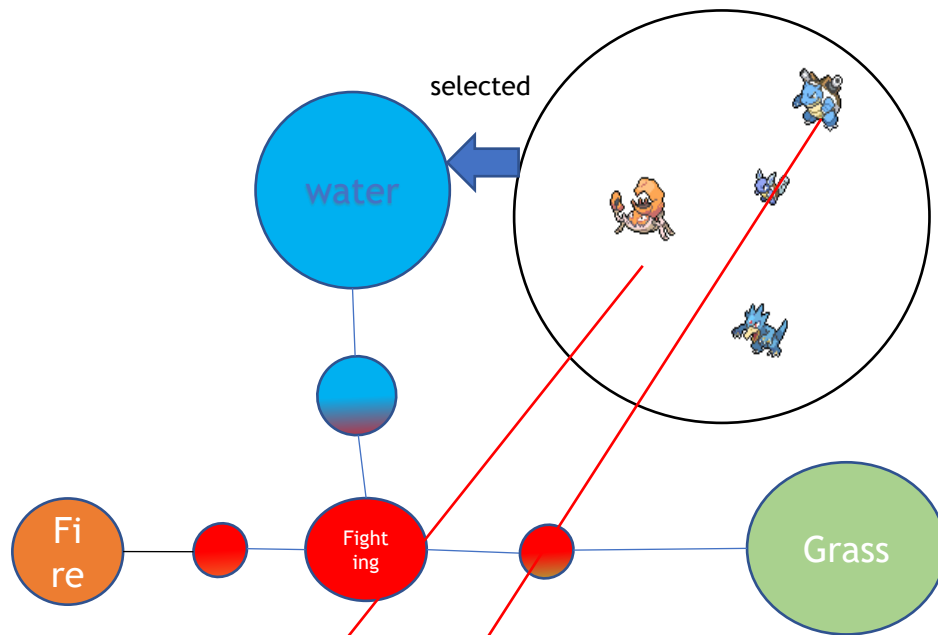Top 10 ATT

ATT from High to low

Graph 3

selected

water

When dragged Pokémon to the comparison table below, it'll show the details of the Pokémon.
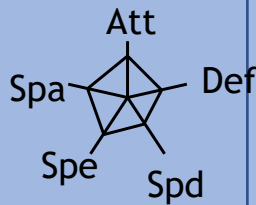
Fi re

Fight ing

Grass
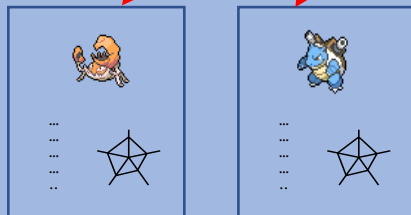
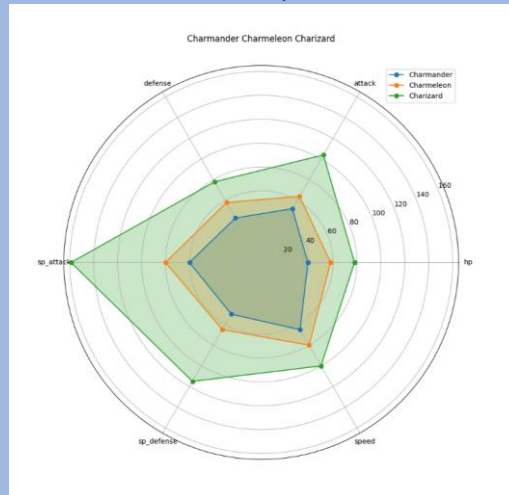Click here to pull out the comparison to see more clearly.

Graph 3

Abilities
Height
Weight
Bmi

Att
Spa   Def
Spe   Spd

Experience to level 100

Abilities
Height
Weight
Bmi

Att
Spa   Def
Spe   Spd

Experience to level 100

VS
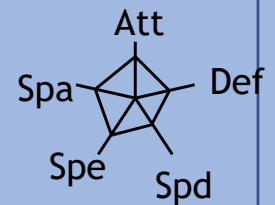
Blaustoise wins against Krabby

Graph 3 - question

!!The character of "A" is repersent any type, like dark, poison, etc.

- What is the distribution of Pokémon in types?
- Which type has the most Pokémon?
- What is type A strong against? What is type A weak against?
- What kind of Pokémon is in type A ?
- What are the details(stats, ability, etc.) of a Pokémon?
- What are that stats distribution in type A?
- Is ATT and DEF correlated? What other stats might affect ATT?(We can choose any stats to compare.)
- Which Pokémon will win when Pokémon X and Pokémon Y fight each other?

Graph 3 - critique

pros :

- Graphical excellence consists of complex ideas communicated with clarity, precision and efficiency (Tufte1 P.3)

- graphical excellence requires telling the truth about the data (Tufte1 P.4)

- Integrate text, chart, graphic, map into a coherent narrative (Tufte2 P.44)

- Utilizing zooming to show different angles to look at data(zoom out to see the distributions of Pokémon in different types, zoom in to see what Pokémon is in it).

Graph 3 - critique

cons :

- When plotting the whole population, the circles might get a little overwhelming.

- It's hard to find a specific Pokémon in the circle when there are a lot of Pokémon.

Contribution

B074020017 杜俞萱	Discussion、Design、PPT
B074020018 張芳瑜	Discussion、Design、PPT
B074020048 黃于千	Discussion、Design、PPT
B074020056 廖仕雅	Discussion、Design、PPT

Reference

- THE PROJECT — Dear Data (dear-data.com)
- https://kenziemurphy.github.io/vinyl/?q=spotify:artist:4dpARuHxo51G3z768sgnrY
- https://www.susielu.com/data-viz/abstractions