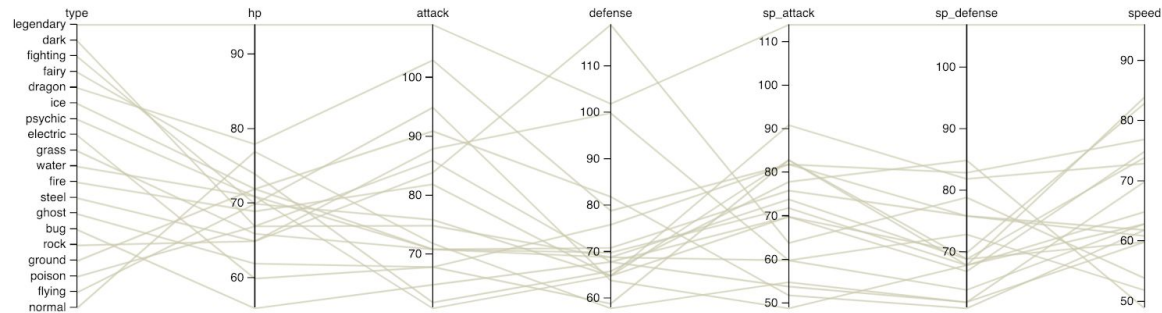# Project 1 Report

Please view both png files but I will post them here:
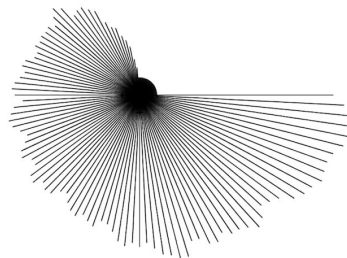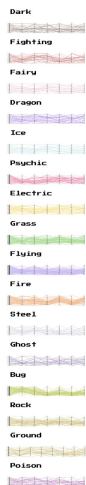
Discover Pokémon Type Trends by Manipulating Parallel Coordinates

To specify a range, click and drag down an axis

Choose Your Starter Pokémon

I wanted to discover more insight into the way pokémon types play a role in selection of pokémon throughout a game. I wanted to support these findings by providing a general overview while also generating a sense of play.

Views

The first view is a parallel coordinates overview of each type and the average statistics of hp, attack, defense, special attacks, special defenses, and their speed. I justify this decision based on the fact that you can compare each type (or pokemon in the small multiples) using custom ranges. The second view is an attempt at small multiples of each type that includes each pokemon that inherits that type. I think this attempt was a way to break down into the next dimension of

specific pokemon and their skills in comparison to all of the other pokemon of the same type. Then I wanted to make a sense of play. The third visualization is an fft analyzer visualization of the gen 1 starter pokemon bulbasaur, charmander and squirtle. Not only is this entertaining, I think this is a good example of animation and how it plays a role in visual encoding. But the set back is that the sounds are short and fast so there isn't much you can really process from it.

Interaction
There is an interaction that allows you to see a detailed view when you click and drag down when hovering over the axis. For choosing your starter pokemon, click on the buttons and listen to their battle cry. (Right now you need to click twice to hear bulbasaur and I haven't figured out why)

Novice Users
Novice users should be able to highlight specific ranges by clicking and dragging through an axis (brushing). First they can view the averages of each type's stats. Then, they can go deeper and select a starter pokemon and view a radial bar chart in real time with an fft analyzation visualization of their battle cry.
Color
Each type is assigned the color that represents the type as seen in the game.
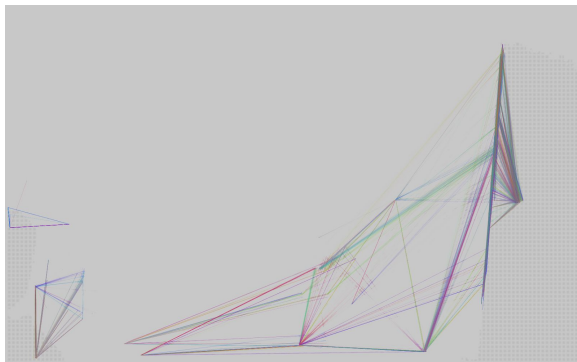
Processing with IR sensor as input

Findings
I found out that normal pokemon would be the easiest to fight because of their low hp. I also found that fire and bug pokemon would

be the hardest to kill if you were just looking at hp, but since it is multidimensional, you would see that they are both lower in defense metrics so it would be about the same if you put a pokemon type against them with higher attack metrics.

Student Evaluation
I talked with a fellow graduate student about my progress. They had never played any video games. This was during my first iteration. The walkthrough of the visualization was hard for them and I had to explain everything about how the selection of pokemon works in relation to color and what their stats mean in battle. We came up with a ton of bug improvements together:

- Fix bug that does not separate by color on the average overview
- Take away extra js files one by one that I was too afraid of taking out in fear of breaking the code.
- Instill bundling from the API I used as a way to handle the number of pokémon
- Optimize my code to only parse from one csv file… not 18……
- Add an additional view of legendary pokémon
- Style the small multiples in a grid Format.
- **For the overview parallel coordinates after you select stats the resulting filtered Pokemon types should be highlighted in the small multiples and the other types should be greyed out or faded out. (From Tarik)**