

Christopher Jacobs

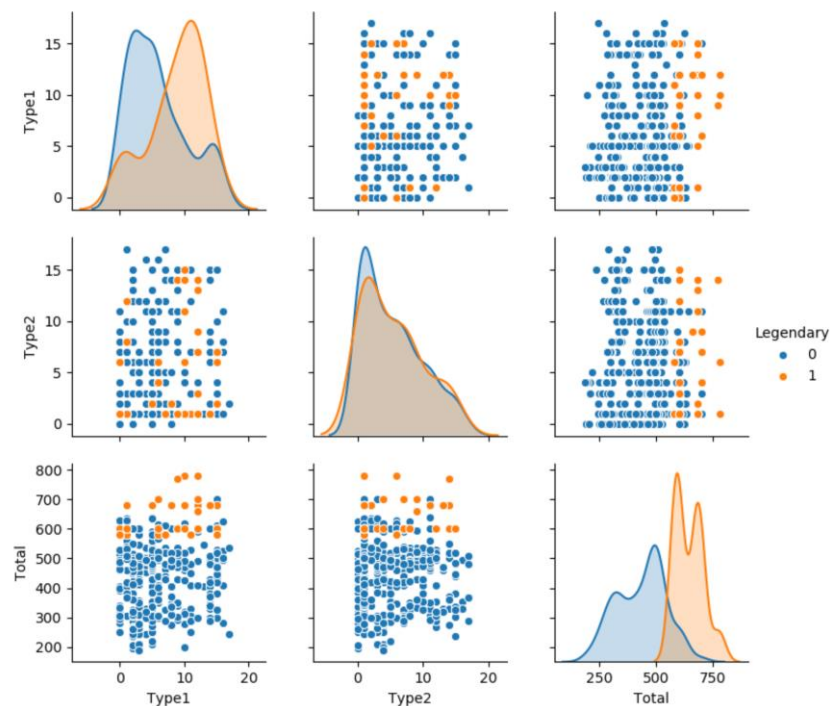
January 6th, 2022

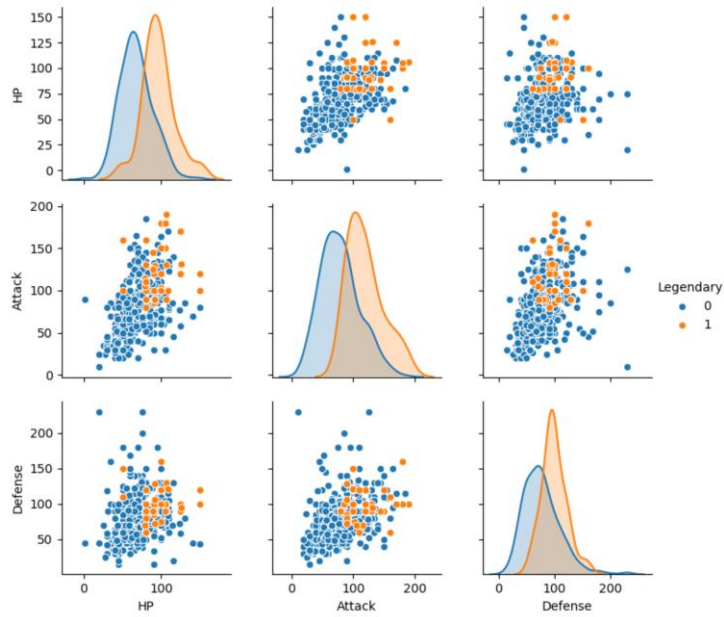
Data Visualization

Pokémon Predicting Project

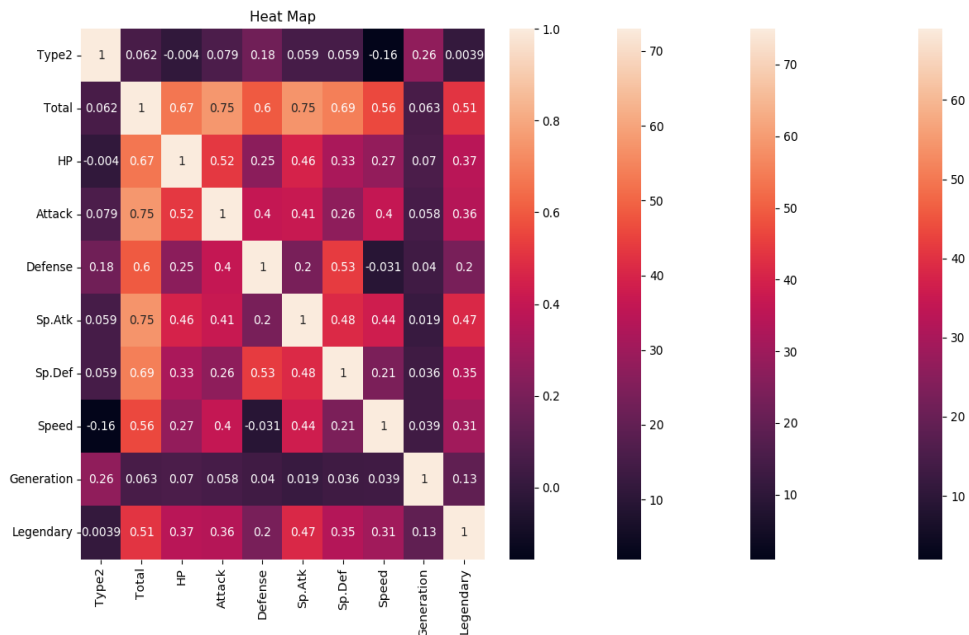
This project's code is on my portfolio. The project was to use several algorithms and some machine learning (Naïve Bayes, decision trees, neural networks, supervised multilayer perception algorithm, logistic regression, kmeans, SVM, KNN) to predict if a Pokémon was legendary or not from the Pokémon's stats then compare those algorithms for accuracy. Decision trees predicted legendary status best with a 94% accuracy. The following graphs and heat maps are made using the seaborn library and matplotlib.

Below are scatter plots of various stats plotted against other stats. Note that type 1 and type 2 stats are categorical and were given a numerical value.



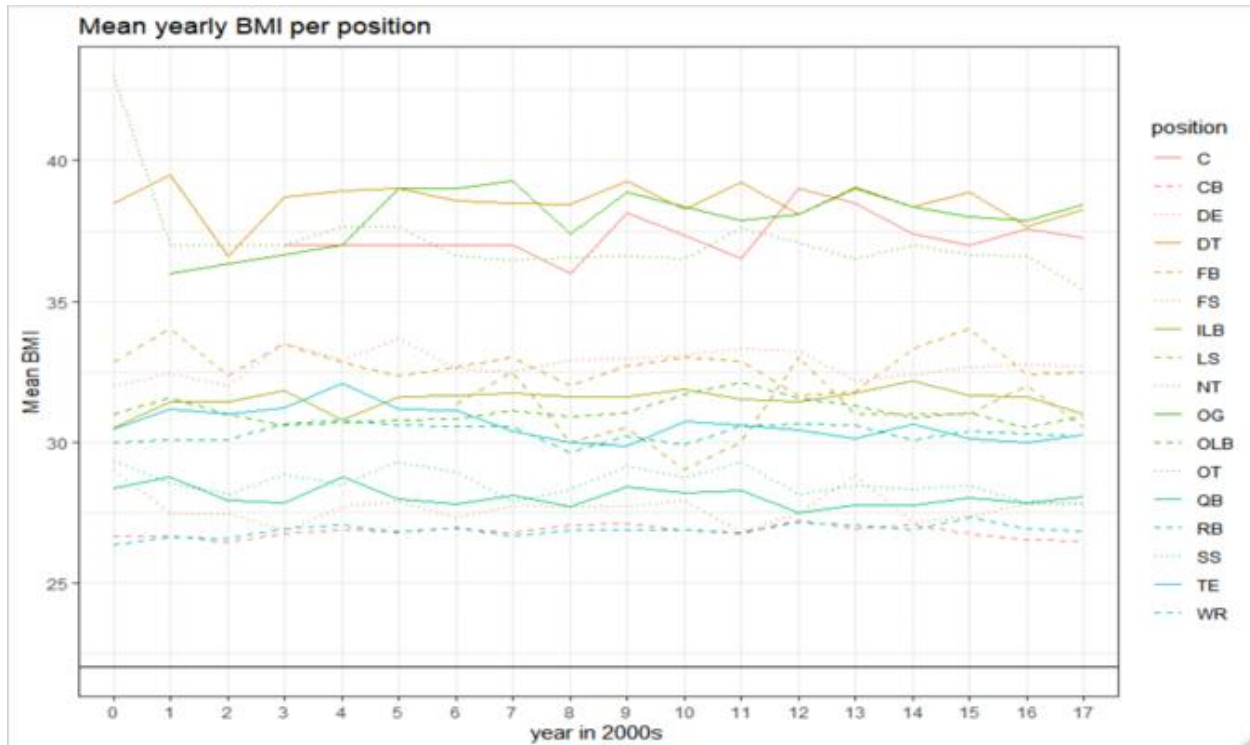


Below is a heat map of various stats plotted against other stats. This is a different representation of the same information as above. Note that type 1 and type 2 stats are categorical and were given a numerical value.



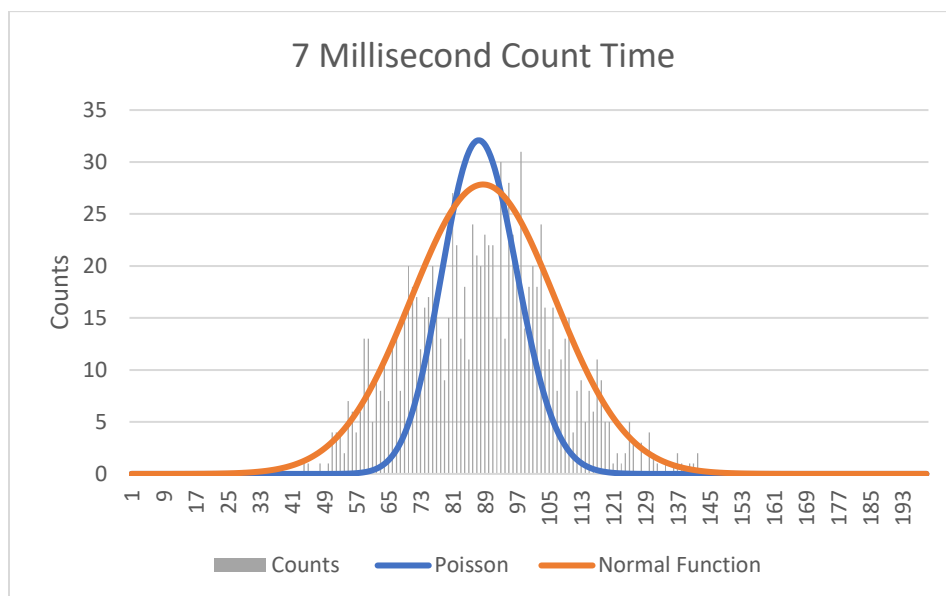
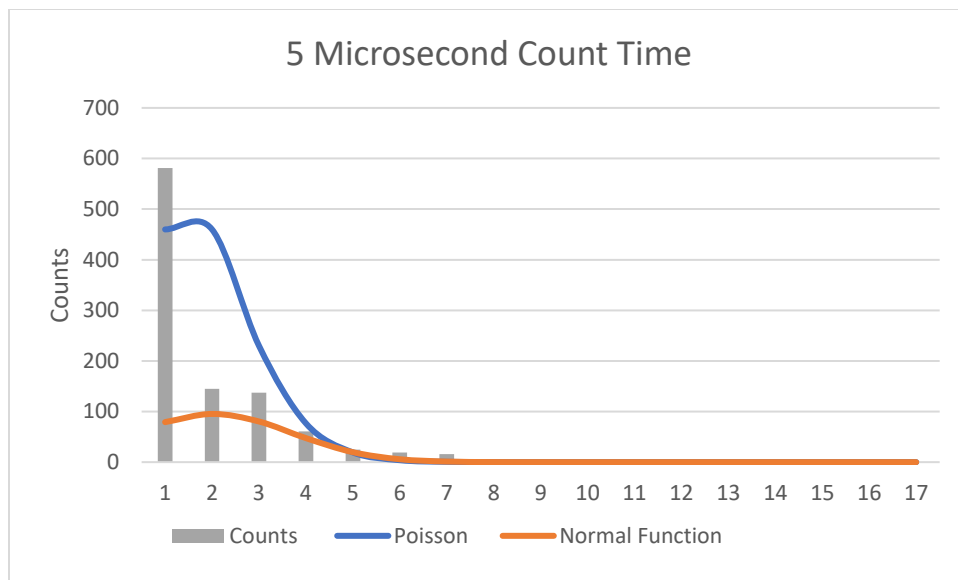
Looking at BMI of Football Players Over the Years Based on Position

The following is a graph produced in R to look at position trends of BMI per position after the year 2000.



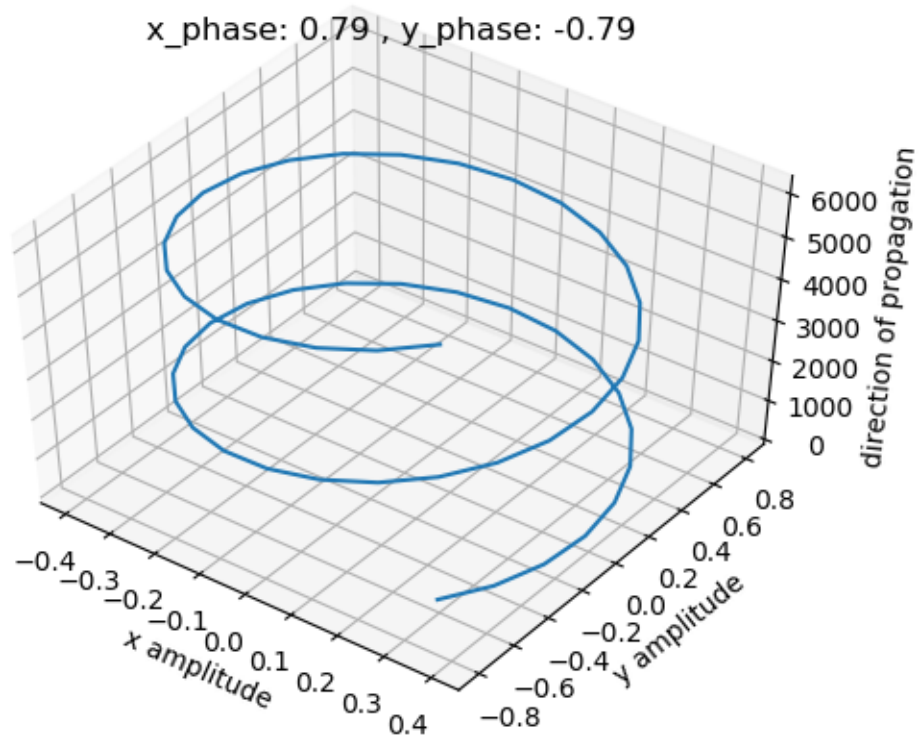
Counting Photons

The below graph is made in excel from experimental data and includes calculated solid lines to visually compare the collected distribution to a Poisson distribution and to a normal function. Photon counts during a short counting time we would expect Poissonian distribution and at longer counting times we expect a normal distribution. This can be seen from the two graphs below.



Polarization of Light

The following 3d graph was produced in Python from computational data. Showing the magnitude of the electric field portion of light as the light propagates over time.



Displaying data from an API call

Below is an example of organizing data dynamically using HTML, CSS, and JavaScript from the Edamam API.

Ketchup



2 14-16 ounce cans of tomato puree or 2 pounds peeled and seeded fresh tomato
3 cloves garlic, sliced
1 onion, diced
3 teaspoons salt
1 1/2 cups water
1 cup sugar
2 tablespoons molasses
1 cup white balsamic or wine vinegar

sachet: one small bunch thyme and one healthy pinch each of whole black pepper, coriander seed, fennel seed and mace.

[Link to recipe's website!](#)