PokémonGo

Finding Rare Pokémon

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Overview

- Exploratory Analysis
- Rarity Calculations: K-Means Algorithm

Introduction

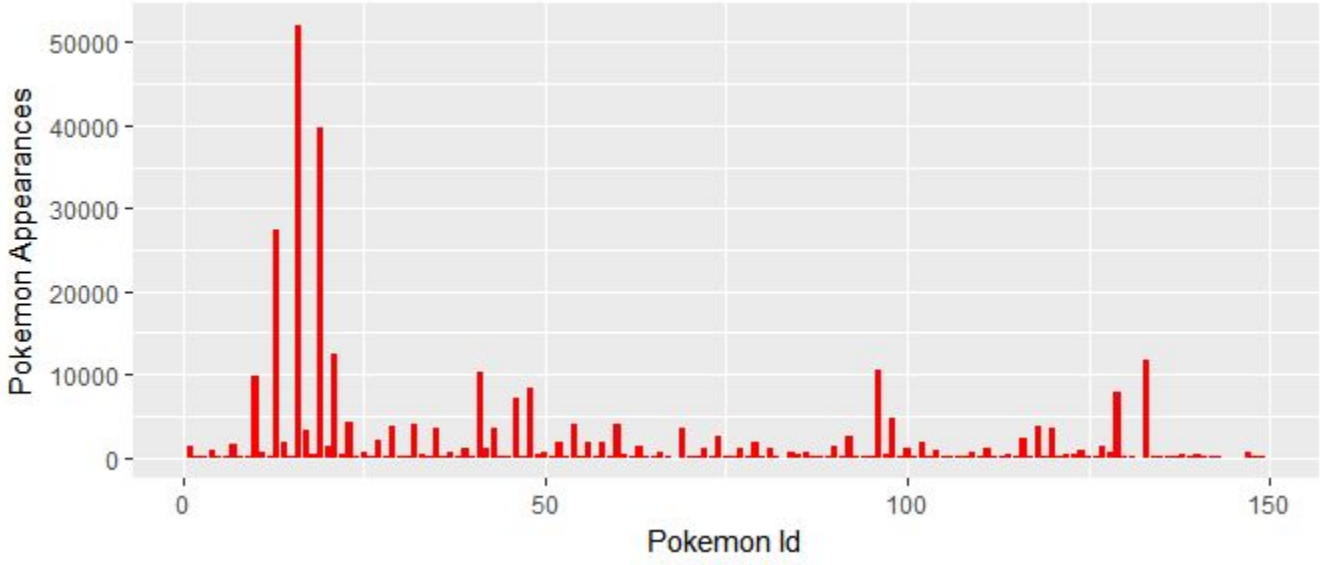
The purpose of this presentation is to take the *PokémonGo* dataset, interpret the results, and provide recommendations.

This presentation will display Pokémon Rarity under these circumstances:

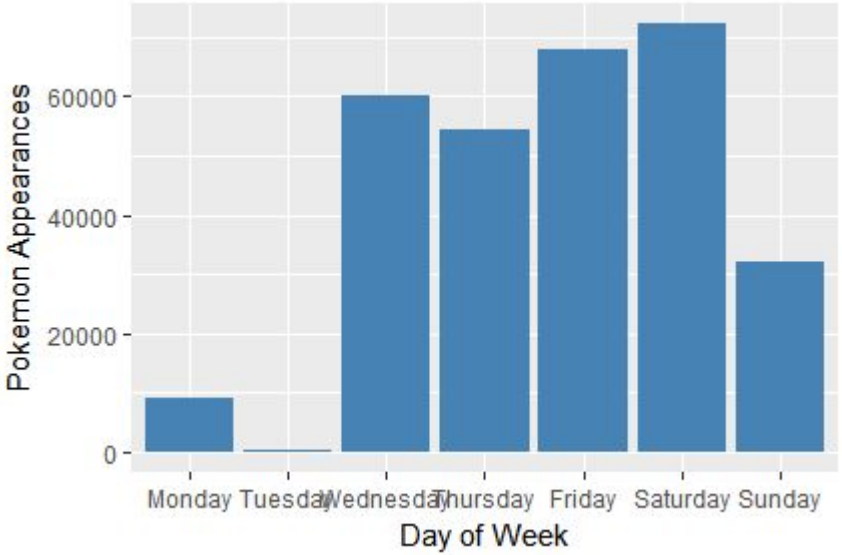
- Environment
- Population Density
- Gym Distance
- Pokéstop Distance
- Rarity Calculations

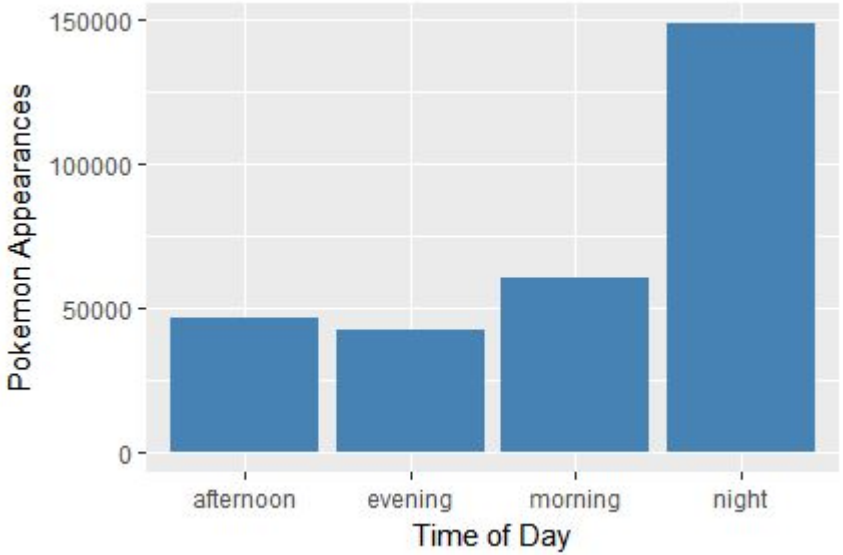
Pokémon Distribution

Here's a list of the Pokémon used in the dataset: Pokémon Id



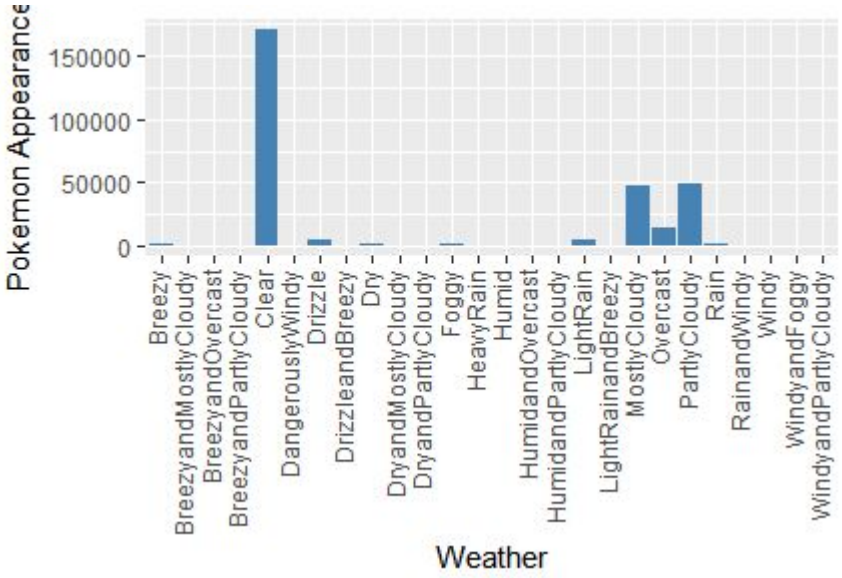
Exploratory Analysis: Day and Time

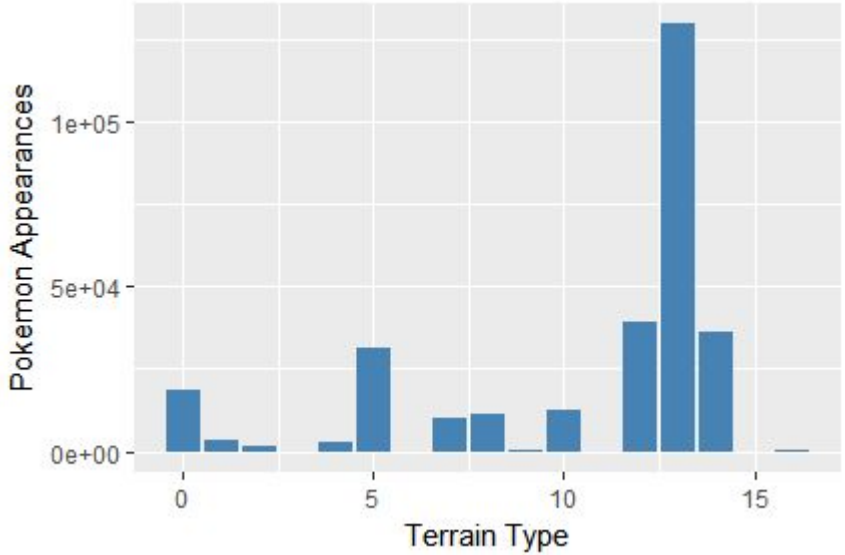




Exploratory Analysis: Weather and Terrain

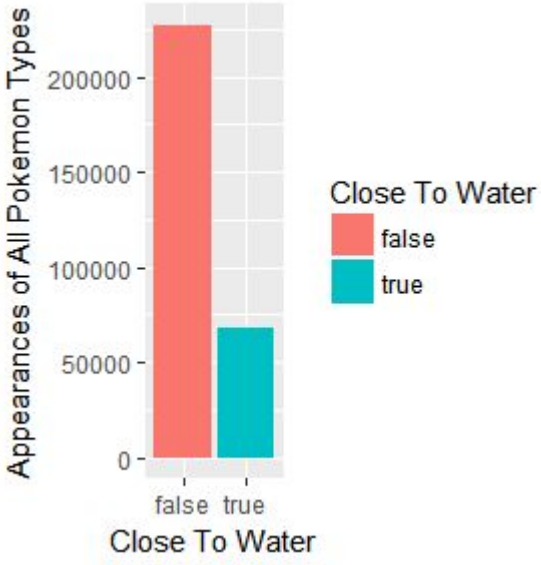
Here's a link to the Terrain Types: [Terrain Type]



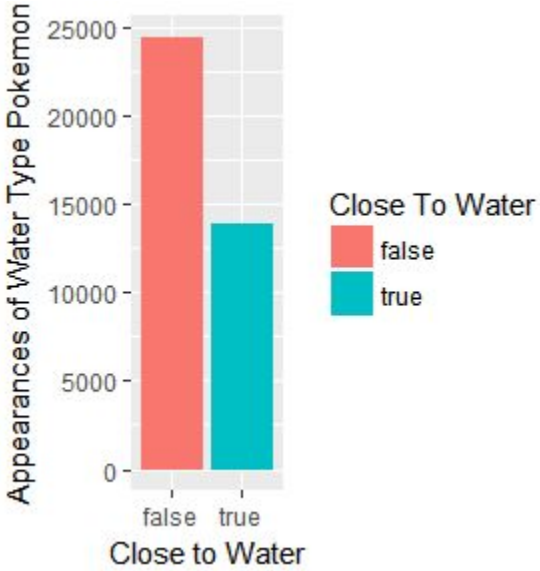


Exploratory Analysis: By Water

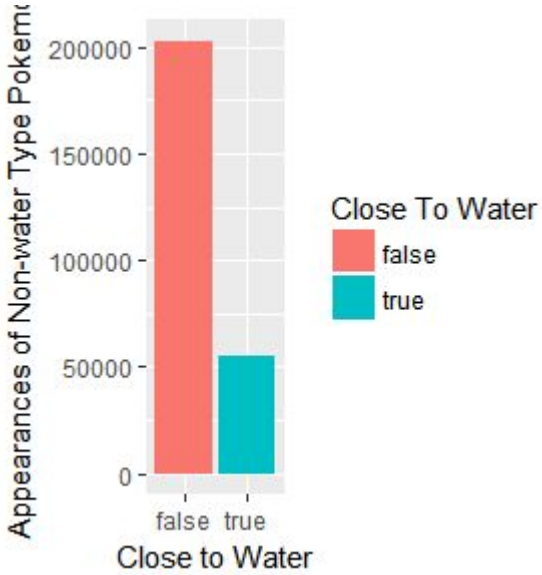
All Pokémon



Water Type Pokémon



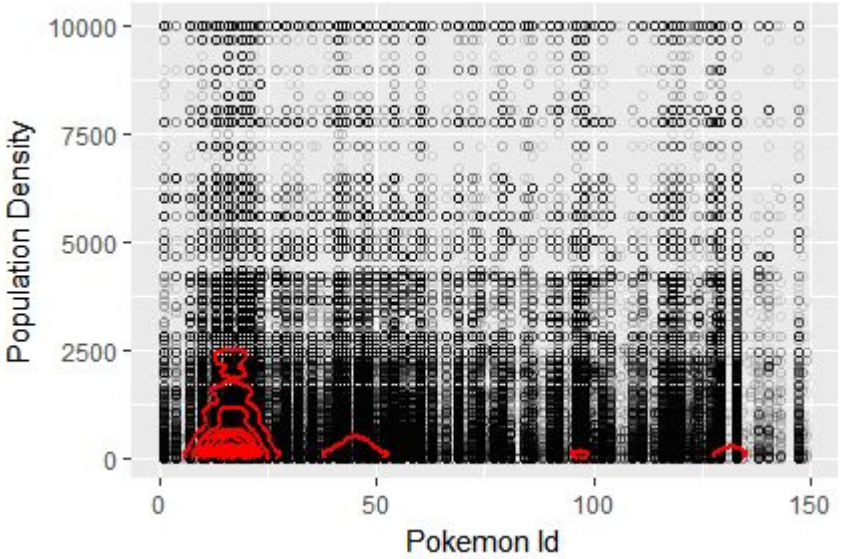
Non-water Type Pokémon

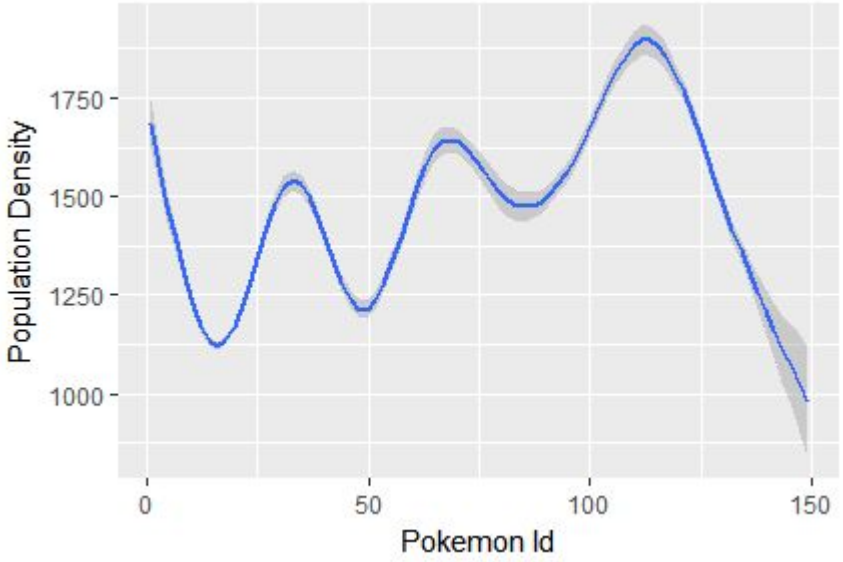


Water Pokémon have a 15% higher chance of spawning near water.

Exploratory Analysis: Population Density

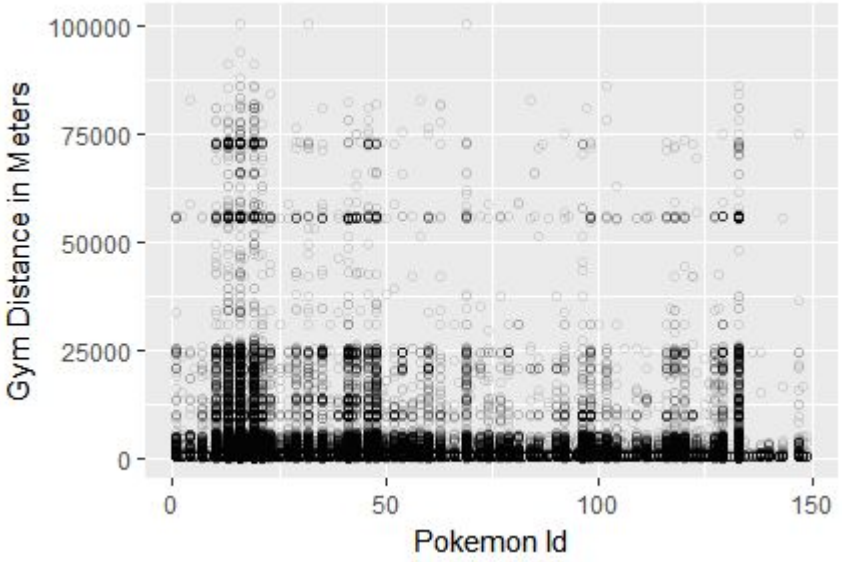
Higher chance of seeing rare Pokémon in higher population densities.

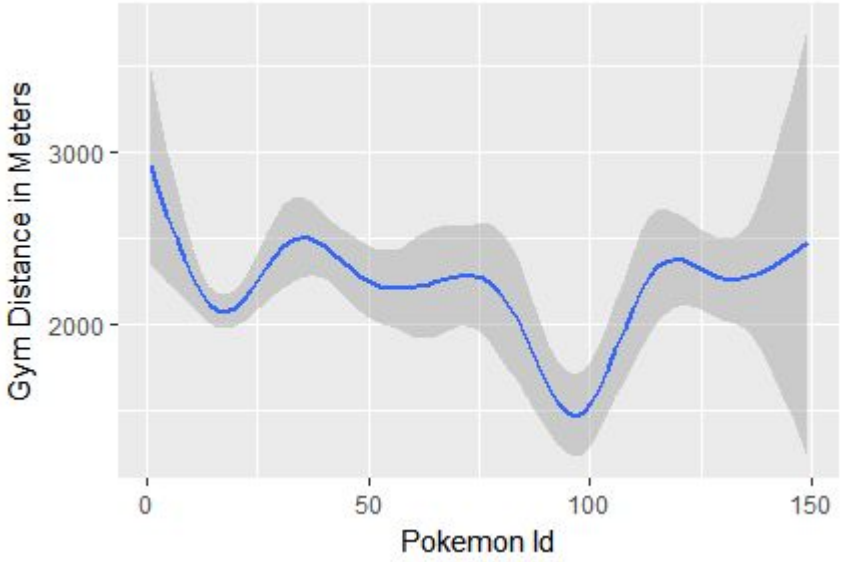




Exploratory Analysis: Gym Distance

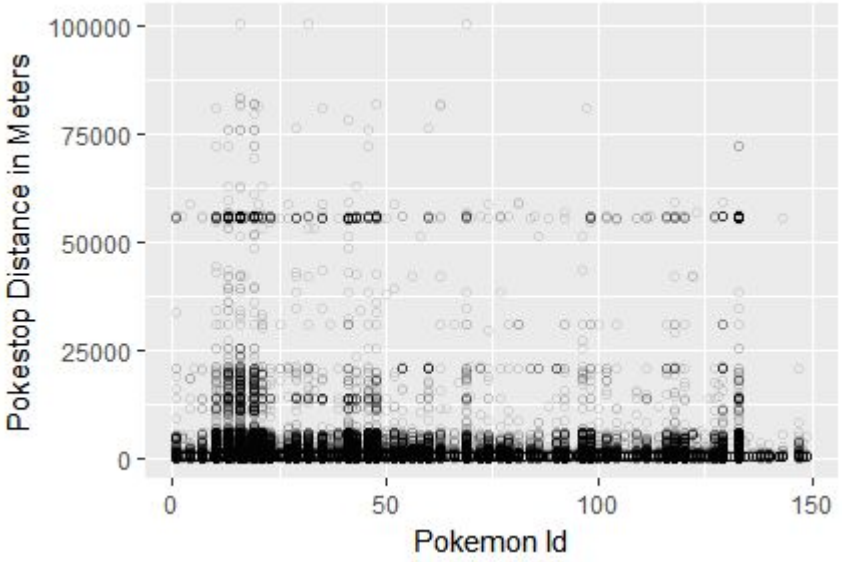
Higher chance of seeing rare Pokémon near Gyms.

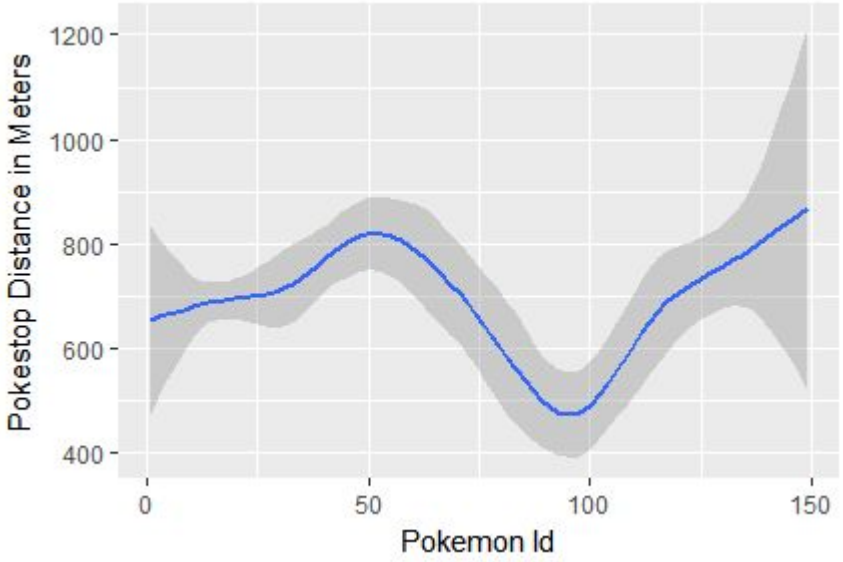


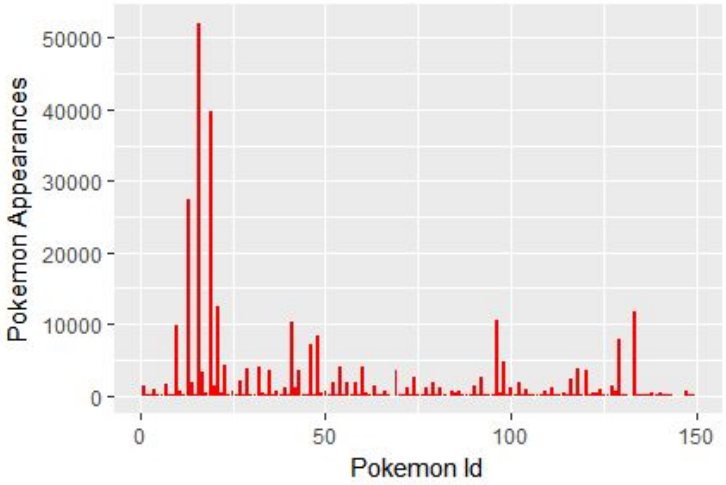


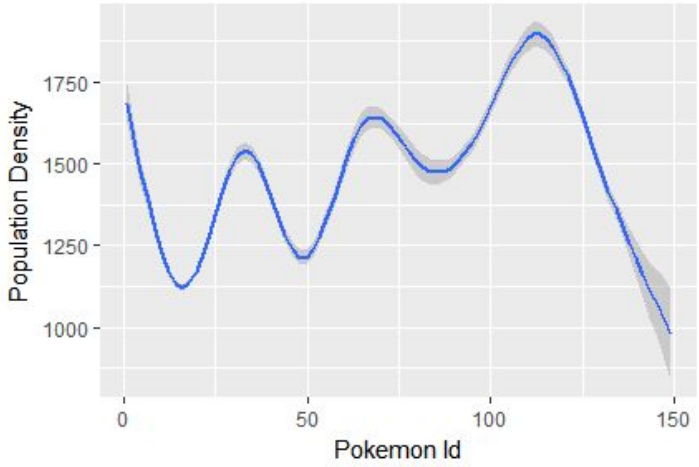
Exploratory Analysis: Pokéstop Distance

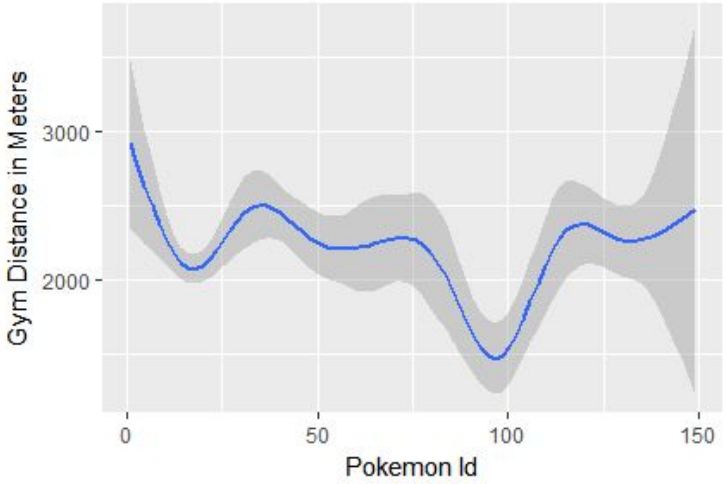
Higher chance of seeing rare Pokémon near Pokéstops.

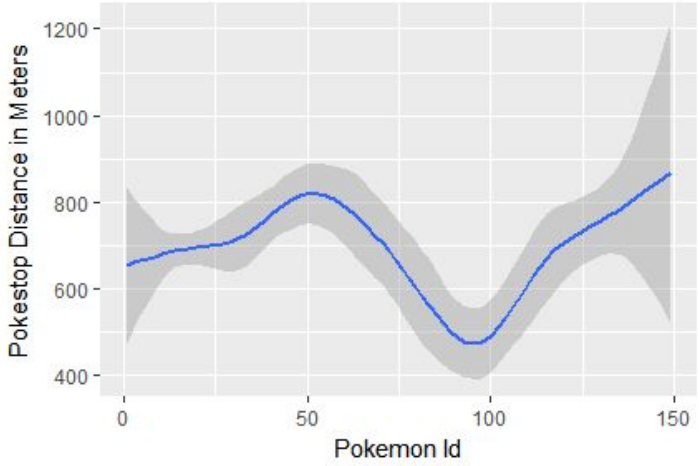





Pokemon Appearances
50000
40000
30000
20000
10000
0
0
50
100
150
Pokemon Id

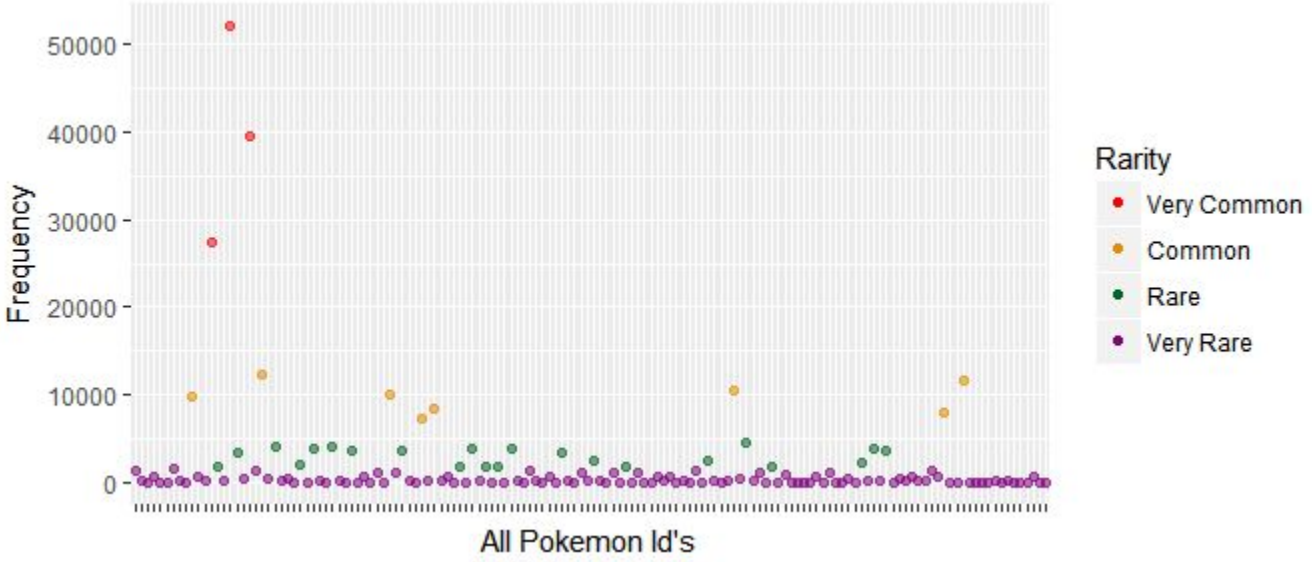

Population Density
1750
1500
1250
1000
0
50
100
150
Pokemon Id


Gym Distance in Meters
3000
2000
0
50
100
150
Pokemon Id


Pokestop Distance in Meters
1200
1000
800
600
400
0
50
100
150
Pokemon Id

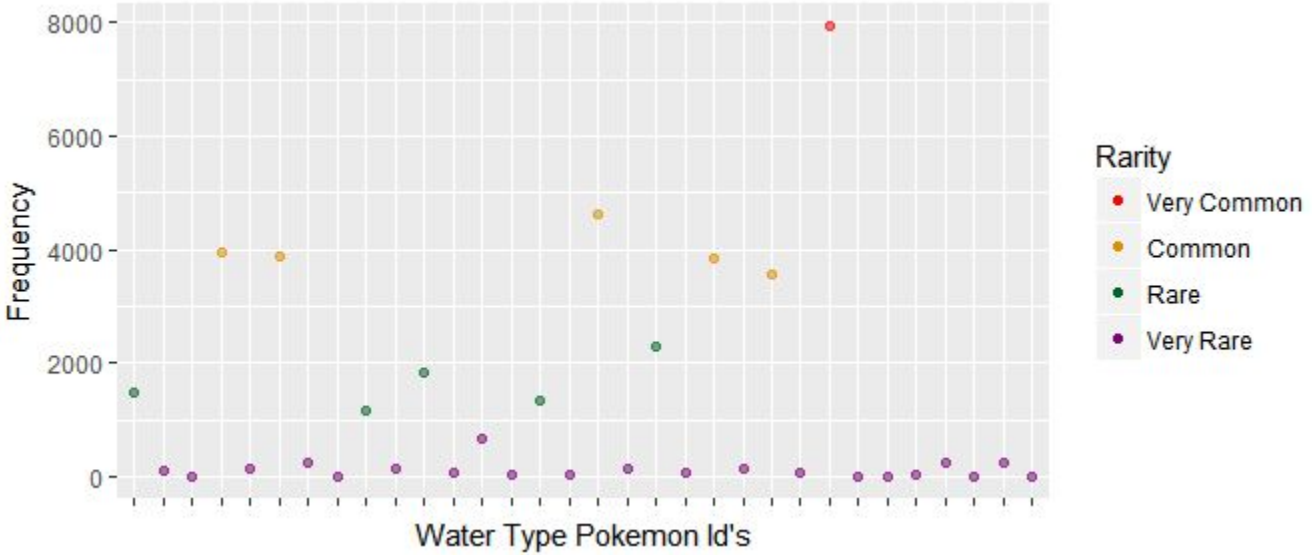
Rarity Calculations: K-Means Algorithm 1

Rarity of every Pokémon:



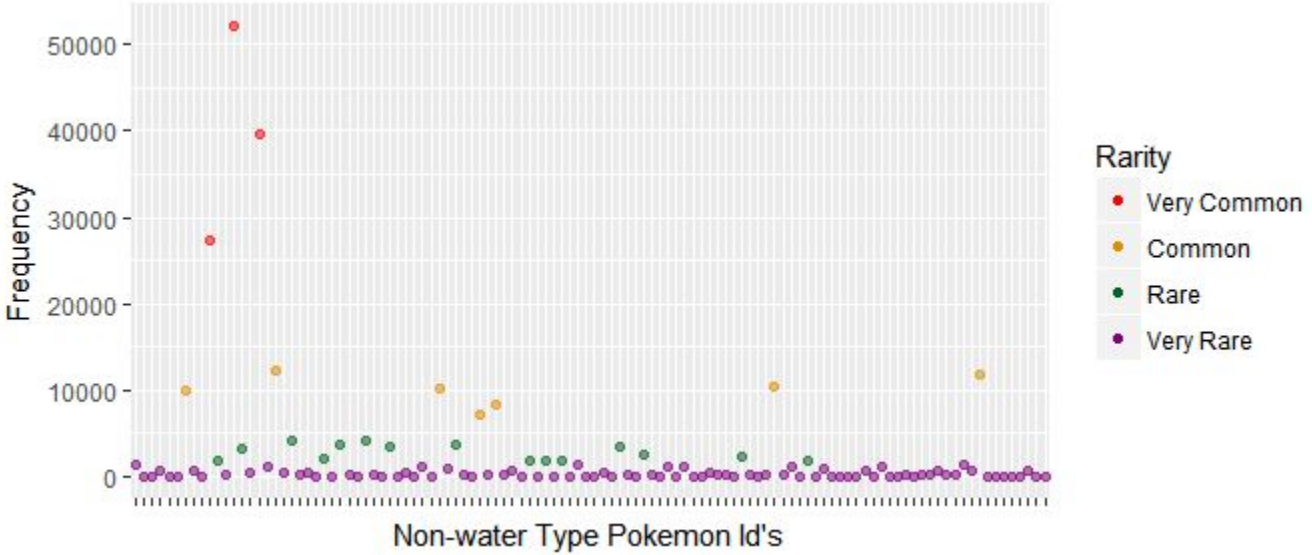
Rarity Calculations: K-Means Algorithm 2

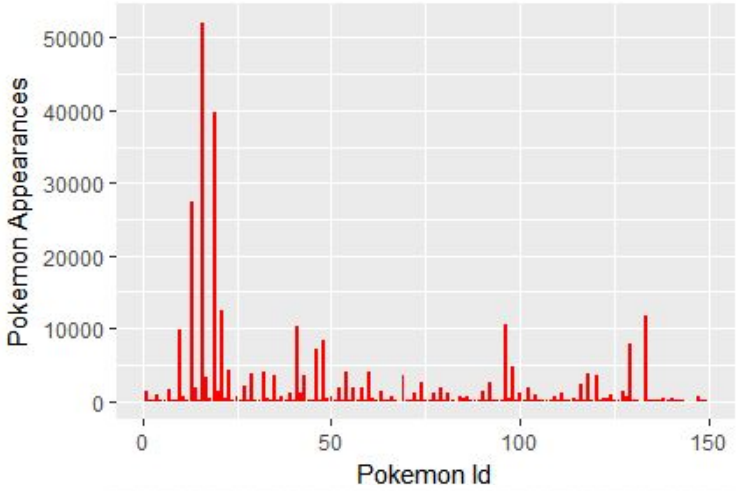
Rarity of water type Pokémon:

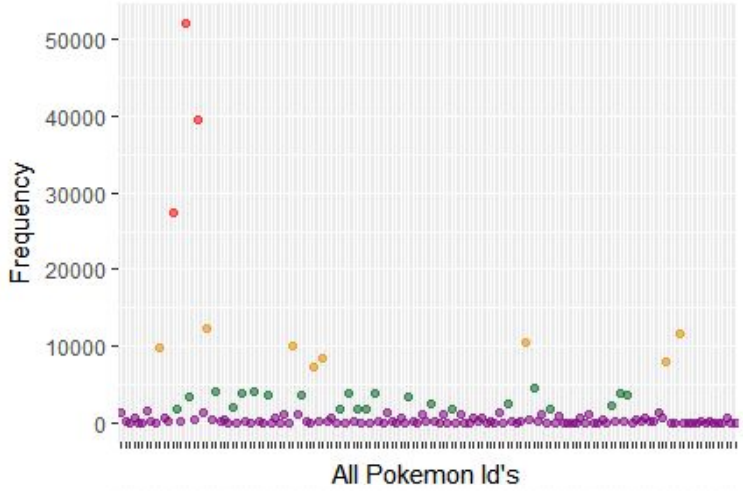


Rarity Calculations: K-Means Algorithm 3

Rarity of non-water type Pokémon:




Pokemon Appearances
50000
40000
30000
20000
10000
0
0
50
100
150
Pokemon Id


Frequency
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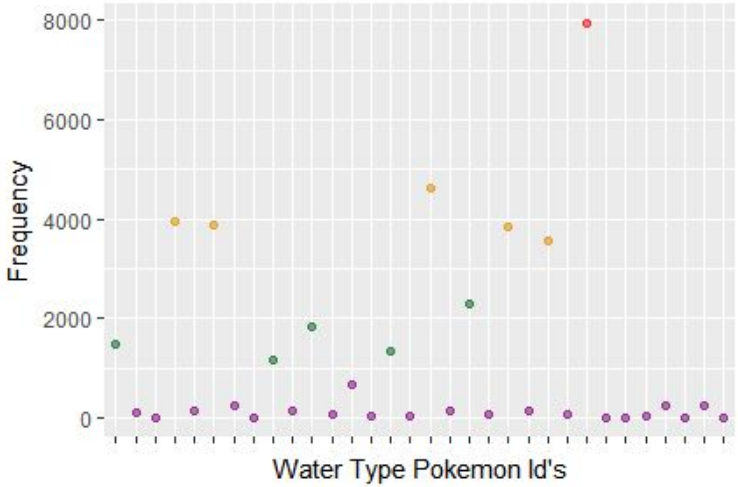
20000
10000
0
All Pokemon Id's


Frequency
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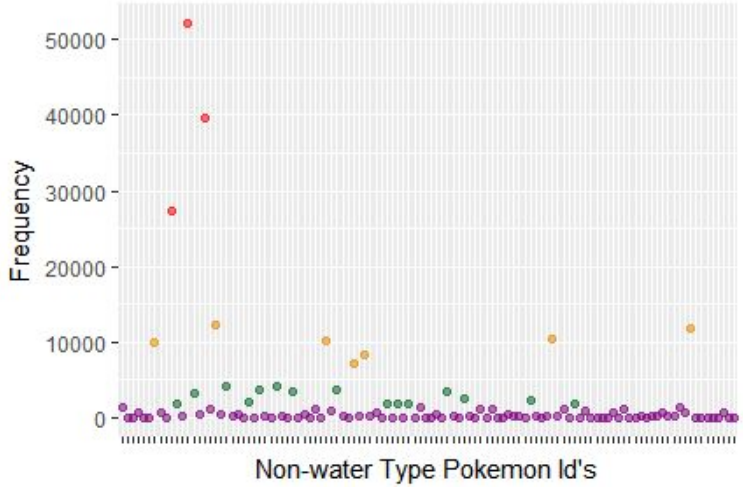
4000
2000
0
Water Type Pokemon Id's


Frequency
50000
40000
30000
20000
10000
0
Non-water Type Pokemon Id's

Recommendations

- Search for rare Pokémon near Gyms and Pokéstops.
- Search for water type Pokémon near water.
- While searching for any type and/or rarity of Pokémon, search in urban areas (Terrain Type: 13), during good weather, during the weekend, and/or during night time.