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# Pokemon Data Visualization

Final Project Proposal

A. Project Background

The Pokémon Company, formed by Nintendo, Game Freak, and Creatures, manages the Japanese media frenchise Pokemon. Pokémon began as a pair of video games and quickly evolved into a media mix franchise with adaptations in a variety of media. Pokémon is one of the most successful media franchises of all time. The goal of this investigation is to use data to better understand the dynamics of the Pokemon universe. The features available for each Pokemon may not appear complicated at first glance, but as we delve into a deeper understanding, we will realize the complexity of the damage multiplier calculation, how one pokemon type correlates with the abilities, and under what circumstances one pokemon is superior to the other. We will attempt to illustrate the data from three perspectives in this project: a single pokemon spotlight, map/location distribution, and attributes correlations.

The formula to calculate damage:

$$Damage = \left(\frac{2 * level + 10}{250} * \frac{attack}{defense} * base\ power + 2\right) * damage\ multiplier$$

B. Data Description

Dataset link

a. gen9_pokemon_stats.csv

This file records the basic status of each Pokemon.

Columns:

i. Pokemon name ( unique column ), Type 1, Type 2

ii. 6 Base value: HP, Attack, Defense, Special Attack, Special Defense, Speed

iii. 18 columns about the damage multiplier apply to each type: The damage multiplier applied to the Pokémon when hit by a move of this type. For example, 0.5 means the Pokémon would take halve damage, and 2 would mean the Pokémon takes double damage.

b. gen9_pokemon_moves.csv

This file contains all moves that the new Pokemon can learn. The attributes contains in this file are name of the move, type of the move, category of the

move (physical / special / other), base power of the move, and the Pokemon that can learn the move.

C. Proposed Solution