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Pokémon Experience Group Classifier



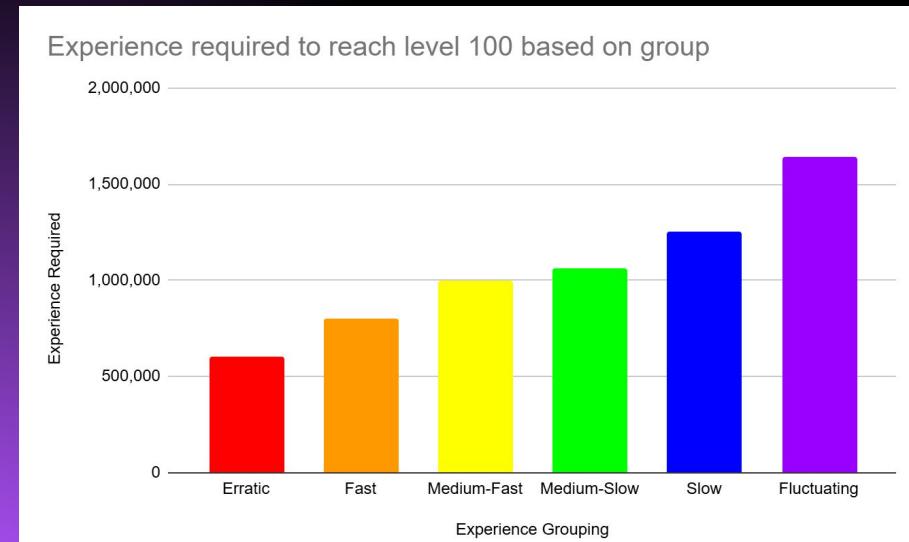
Why Should You Care?

- Every good Pokémon Trainer should want to create a balanced team!
- Some Pokémon excel in
 - Early-Game
 - Mid-Game
 - Late-Game
- Good idea to have Pokémon strong in every section.
- Experience Groups can measure how strong a Pokémon is at a point in the game.



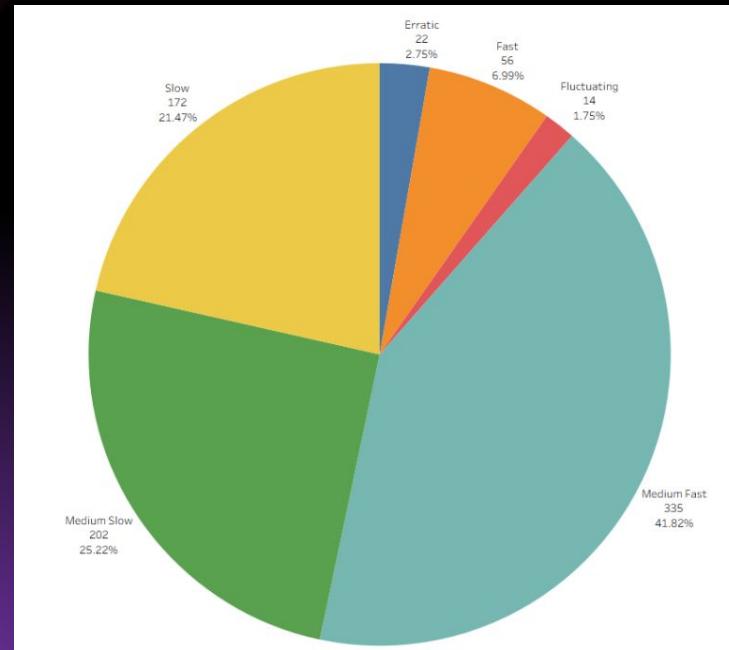
What is an Experience Group?

- Amount of EXP to reach level 100
- Determines how fast a Pokémon grows
- Usually tied to Pokémon's overall power
 - Ex. Pokémon in the Slow group generally are stronger than those in the fast group



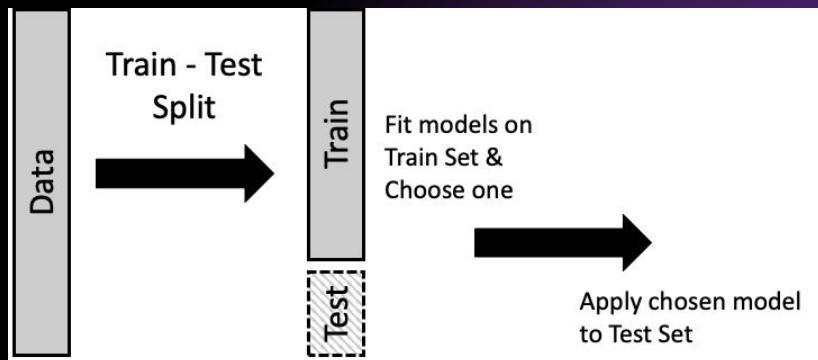
The Data

- Overall, only have 801 Pokémon (aka 801 data points)
- Some Experience Groups have much less data than others
- Major three groups will be focused (88.51% of all data)



The Process

- Dataset has 7 generations of Pokémon
- Train on 6 generations, test on 1, repeat for every generation.
- Compile all testing back together to get overall accuracy.



The Classifier

- Random Foresting Model
- Uses Parameters
 - "base_total"
 - "evolution_stages"
 - "capture_rate"
 - "percentage_male"
 - "base_experience"
 - "base_egg_steps"
 - "no_in_generation"
 - "color"
 - "is_legendary"
 - "height_m"
 - "weight_kg"
 - "attack"
 - "speed"
- Overall Accuracy: 72.3%

Experience Group	Support	Correct	Incorrect	Accuracy
Erratic	22	0	22	0.000
Fast	56	9	47	0.161
Fluctuating	14	0	14	0.000
Medium Fast	335	297	38	0.887
Medium Slow	202	160	42	0.792
Slow	172	113	59	0.657

Totals

- **Total Pokémon:** 801
- **Overall Correct:** 579
- **Overall Incorrect:** 222
- **Overall Accuracy:** 0.723

Conclusion

- 72.3% accuracy is really solid!
- Hard to predict experience groups with less than 100 data points.
- Data is ultimately at the will of Japanese game developers.

Why Arceus
have you
betrayed me?

Nincada
(Fluctuating Group)



The LITERAL god of all
Pokemon who requires LESS
experience than Nincada to
reach level 100

Arceus
(Slow Group)

