

# PS11 White

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## 1 Introduction

- Cultural significance and origin of Pokemon (Bainbridge 2014; Schmidt-Jeffris and Nelson 2018; Shelomi et al. 2012).
- Establishment of Pokemon competitive environment, including description of Smogon and Pokemon Showdown (Zielke 2020; Montes 2013).
- Examples of complexity of play and AI created for it (Huang and Lee 2019; Montes 2013; Simões et al. 2020; Zielke 2020; Panumate and Iida 2016)
- Description of complexity of team building (Verdear and Visser 2021)

## 2 Data

- Description of data set (full Pokedex from kaggle.com), and full listing of competitive evaluation from Smogon. Note - data was primarily cleaned in Excel, removing unnecessary variables like the Japanese name (as I can't read Japanese), or Pokedex entry, as well as addition of competitive battle tier.
- Descriptive statistics of fully evolved Pokemon, including stats by primary type, abilities, and tier.
- Changes over the Pokedex, estimates of Pokemon specialization, especially within tier.
- Prediction of competitive tier of 8th generation Pokemon based on 7th generation competitive scene. This will definitely fail to be fully accurate, as there were some significant changes from gen 7 to 8, including the omission of many Pokemon species. Additionally, at present the data set does not consider Mega Evolutions or Gigantimaxes, which are important tactical choices.
- Prediction of teams within tiers based on typing, stats and Abilities.

### 3 Conclusions

- Complexity of decision state
- Limitations of models that fail to include competitive player ingenuity and creativity (ex. change in Uber tier meta following the consecutive introductions of Primal Kyogre, Arceus-Grass, followed by Hidden Power Fire Mega Gengar).
- Brief discussion of competitive scene over time and potential future decisions.

## References

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