Executive Summary

This project analyzes a dataset of **800 Pokémon** across **6 generations**, focusing on **types, base stats (HP, Attack, Defense, Speed, Special stats), Legendary status, and generational trends**.

The analysis highlights clear performance differences between **Legendary and non-Legendary Pokémon**, identifies **top-performing Pokémon by key combat stats**, and reveals **type-wise strengths and weaknesses**. The dashboard effectively transforms raw data into actionable insights using visual analytics.

Key findings show that **Legendary Pokémon dominate in total stats and attack power**, while **specific types (Dragon, Psychic, Rock, Steel)** consistently outperform others in combat-related metrics. Generation-wise analysis indicates that newer generations tend to introduce Pokémon with **higher average total stats**, emphasizing game balance evolution.

Dataset Overview

- **Total Pokémon:** 800

- **Generations Covered:** 1 to 6

- **Legendary Pokémon:** 65 (~8.1%)

- **Average Total Stats:** ~435

- **Attributes Analyzed:**

    o HP, Attack, Defense

    o Special Attack, Special Defense

    o Speed

    o Total Base Stats

    o Type 1 & Type 2

    o Legendary Status

Key Analytical Insights

Legendary vs Non-Legendary Pokémon

- Legendary Pokémon have **significantly higher average total stats** than non-Legendary ones.

- They dominate in:

    - **Attack**

    - **Special Attack**

    - **Overall Total Stats**

- This confirms their intended role as **elite and rare characters** in gameplay.

Top Pokémon by Combat Power

Highest Attack Pokémon:

- **Mega Mewtwo X** (Attack: 190)

- **Mega Heracross**

- **Primal Groudon**

- **Mega Rayquaza**

- **Deoxys (Attack Forme)**

These Pokémon are ideal for **offensive battle strategies**.

Type-wise Performance Analysis

- **Dragon & Psychic types** show the **highest average total stats**.

- **Rock and Steel types** have superior **Defense averages**.

- **Electric and Fire types** excel in **Speed and Attack balance**.

- Dual-type Pokémon often outperform single-type Pokémon due to **stat optimization**.

Generation-wise Trends

Generation	Pokémon Count
Gen 1	166
Gen 2	106
Gen 3	160
Gen 4	121
Gen 5	165
Gen 6	82

- **Generation 5** introduces the highest number of Pokémon.
- Later generations show a **rise in average total stats**, indicating:
  - Competitive balancing
  - Increased power scaling
- Legendary presence increases notably in **Gen 3–5**.

Defensive & Speed Insights

- Pokémon with **Defense > 150** are rare and mostly **Legendary or Mega Evolutions**.
- Speed-focused Pokémon often sacrifice defense, highlighting **trade-offs in stat design**.
- Balanced Pokémon perform better overall than extreme single-stat Pokémon.

Dashboard Effectiveness

Your dashboard successfully:

- Uses **bar charts, pie charts, radar plots, and line graphs**
- Compares **Legendary vs Non-Legendary clearly**
- Shows **type dominance visually**
- Highlights **top 10 / top 20 Pokémon** effectively

This makes it **executive-friendly and presentation-ready**.

Recommendations

- ◆ **For Game Strategy / Gameplay Analysis**

  - Choose **Legendary or Dragon/Psychic types** for offensive dominance.

  - Use **Rock/Steel types** as defensive tanks.

  - Prefer **balanced stat Pokémon** for long battles.