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Data Visualization
Power Rangers Analysis

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Introduction

Since 1993, Power Rangers has become a global hit with 25+ seasons and 900+ episodes. But what drives its success? Which seasons or characters stood out — and why? Let's find out through the data!

Introduction

- **Reason for Choosing the Dataset?**
  - Explore trends across 25+ Power Rangers seasons using ratings and character data.
  - Use visualizations to reveal patterns in popularity, season length, and fan favorites.
  - We love Power Rangers^^.

- **What we aim to do:**
  - Q1: How do season duration and other attributes impact a show's popularity and audience reception?
  - Q2: Which characters were the most prominent across seasons?

Dataset overview

- **Data Source:**
  - Power Rangers: Seasons and episodes data collected by **karetnikovn** on Kaggle.

- **28** Seasons **(power_rangers_seasons.csv)**: Contains details about each season, including **season_title, season_num, number_of_episodes, air_date_first_ep, air_date_last_ep, producer, and IMDB_rating.**

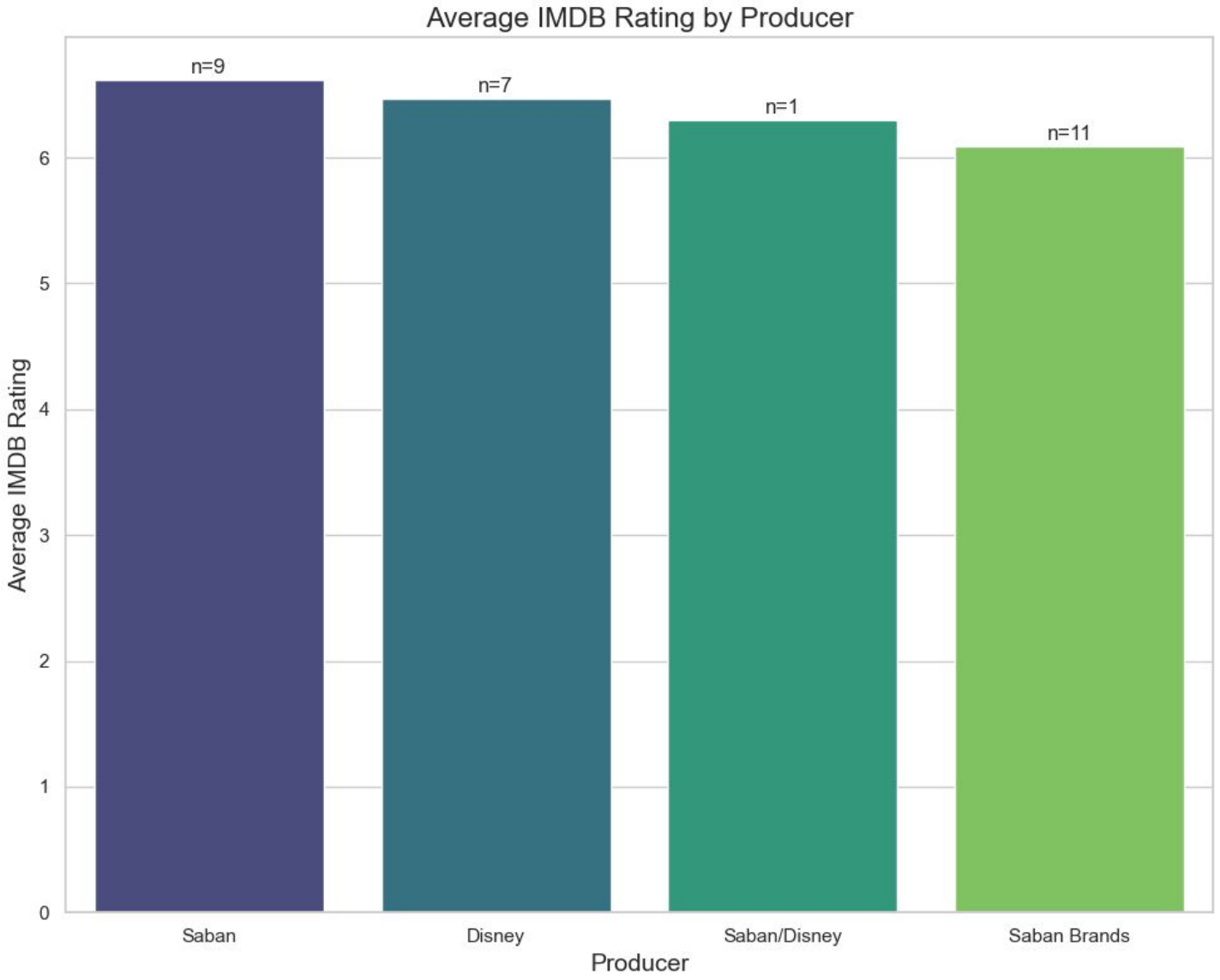
- **921** Episodes (**power_rangers_episodes.csv**) : Contains details about individual episodes, such as **episode_title, season_title, air_date, IMDB_rating, total_votes,** and **desc (episode description).**

Q1. What factors influence a season's popularity?

- To understand what makes a season well-received by audiences, we explored several key factors:
  - Producer
  - Number of Episodes
  - Release Time
  - Days Since Previous Season

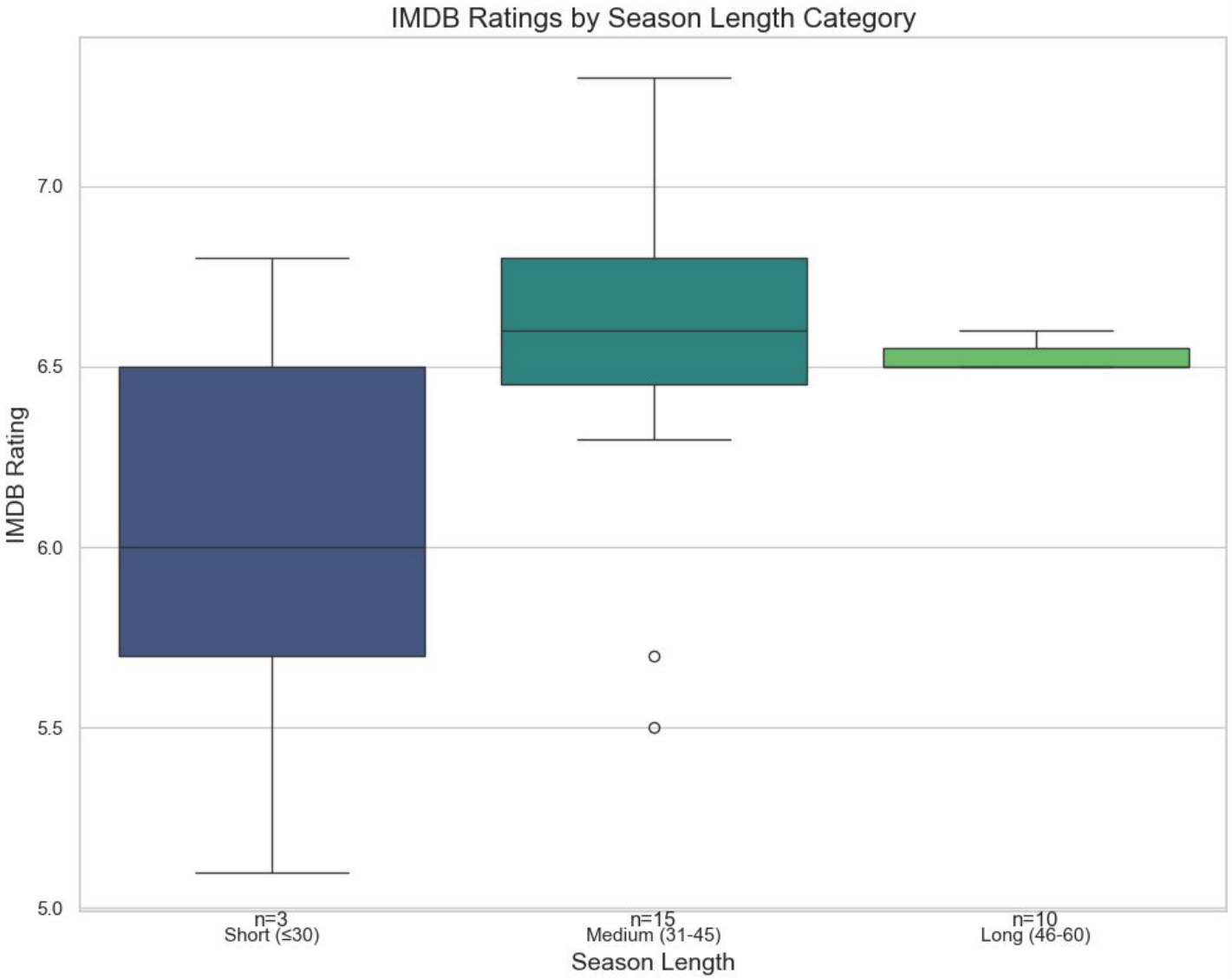
Each factor was analyzed based on IMDb ratings as a measure of popularity.

Q1. Factor: Producer



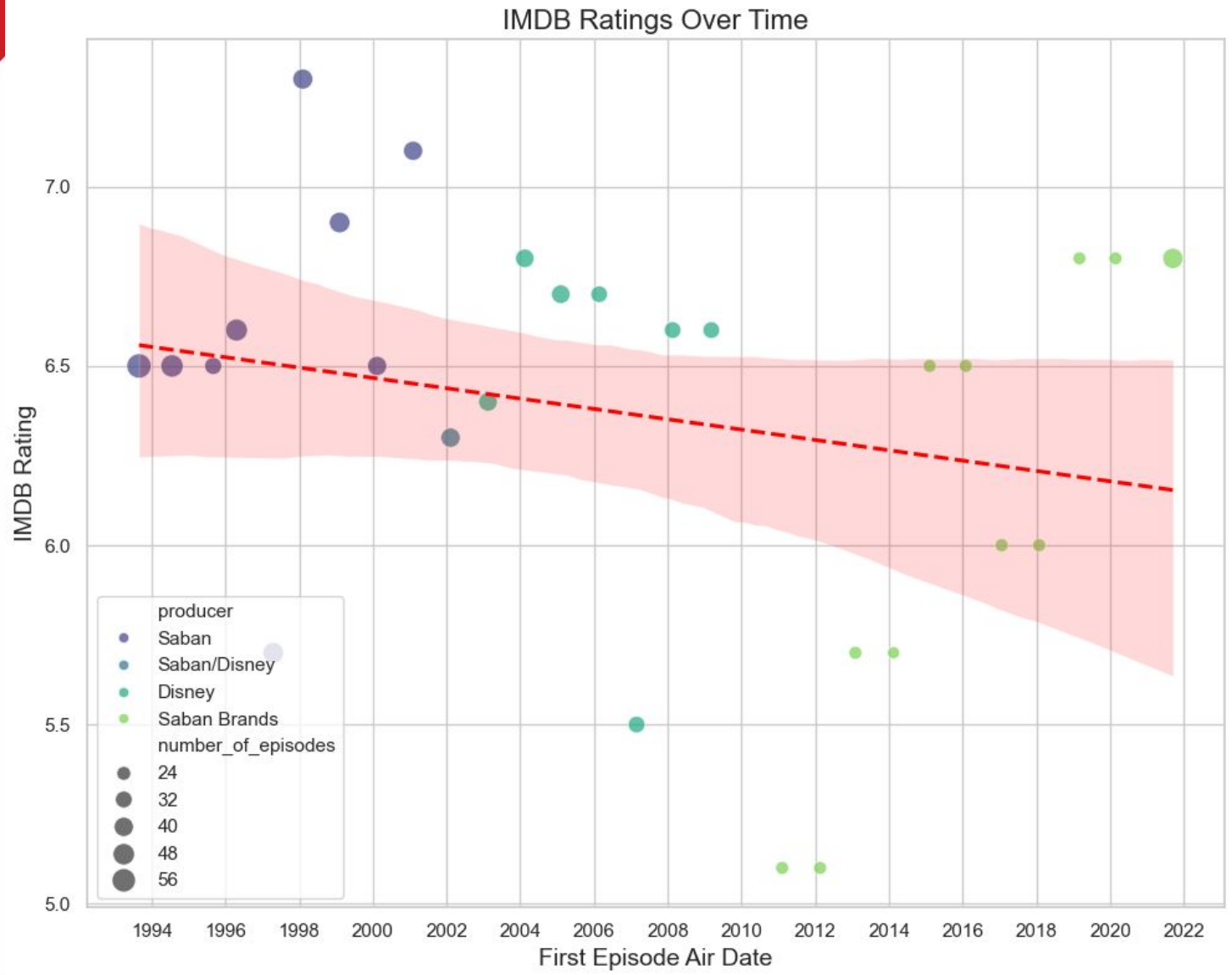
- **Motivation:** Certain producers may consistently create more popular seasons.
- **Observation**: The rating are relatively the same.

Q1. Factor: Season Length



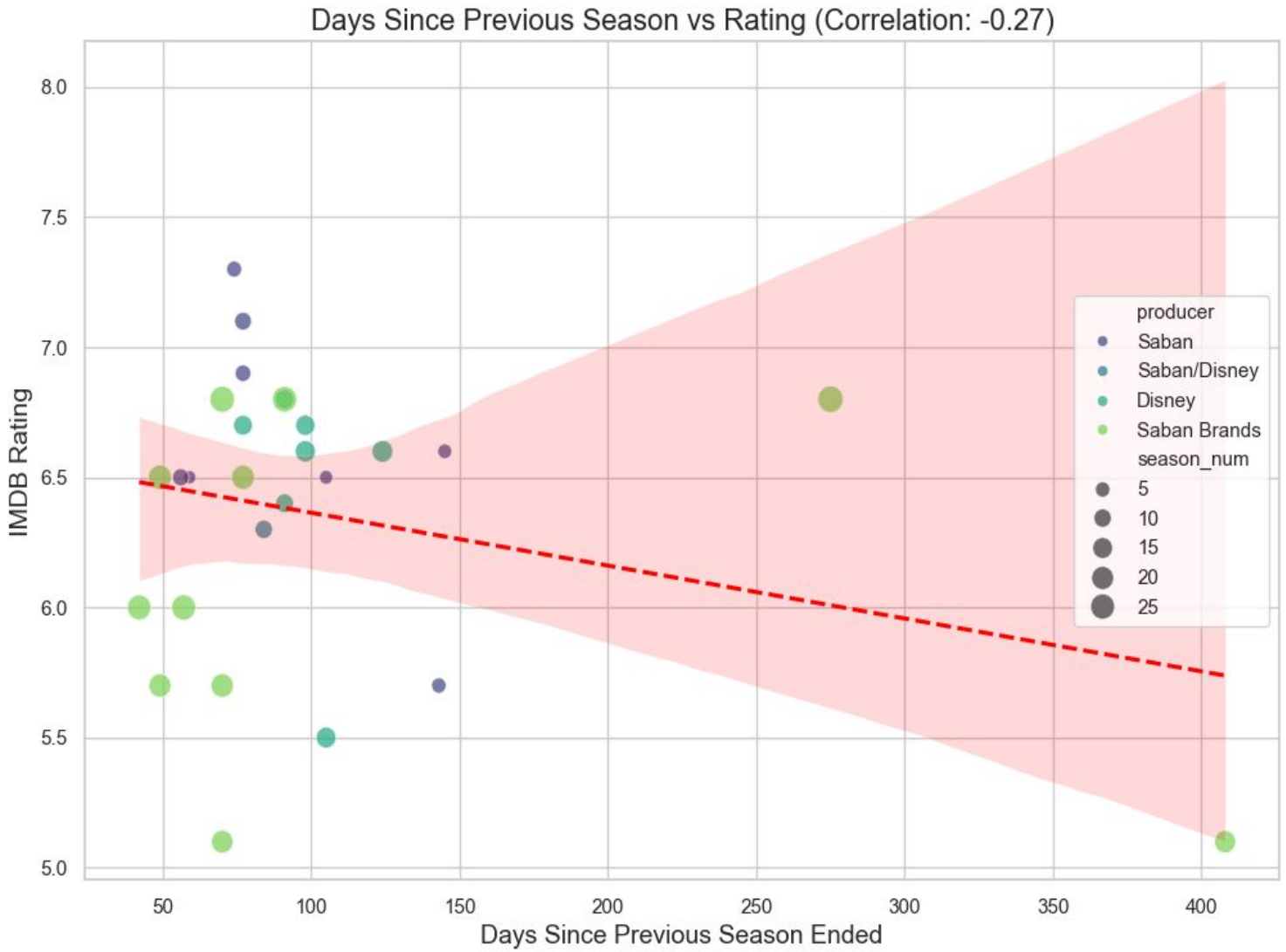
- **Motivation:** Does a higher or lower episode count affect ratings or viewer engagement?
- **Observation**: Medium-length seasons have the highest median IMDb rating.

Q1. Factor: Release Time



- **Motivation:** Are newer seasons more popular? Or does the audience's taste change?
- **Observation**: Older seasons **(1990s–2000s)** received higher ratings on average.

Q1. Factor: Days Since Previous Season

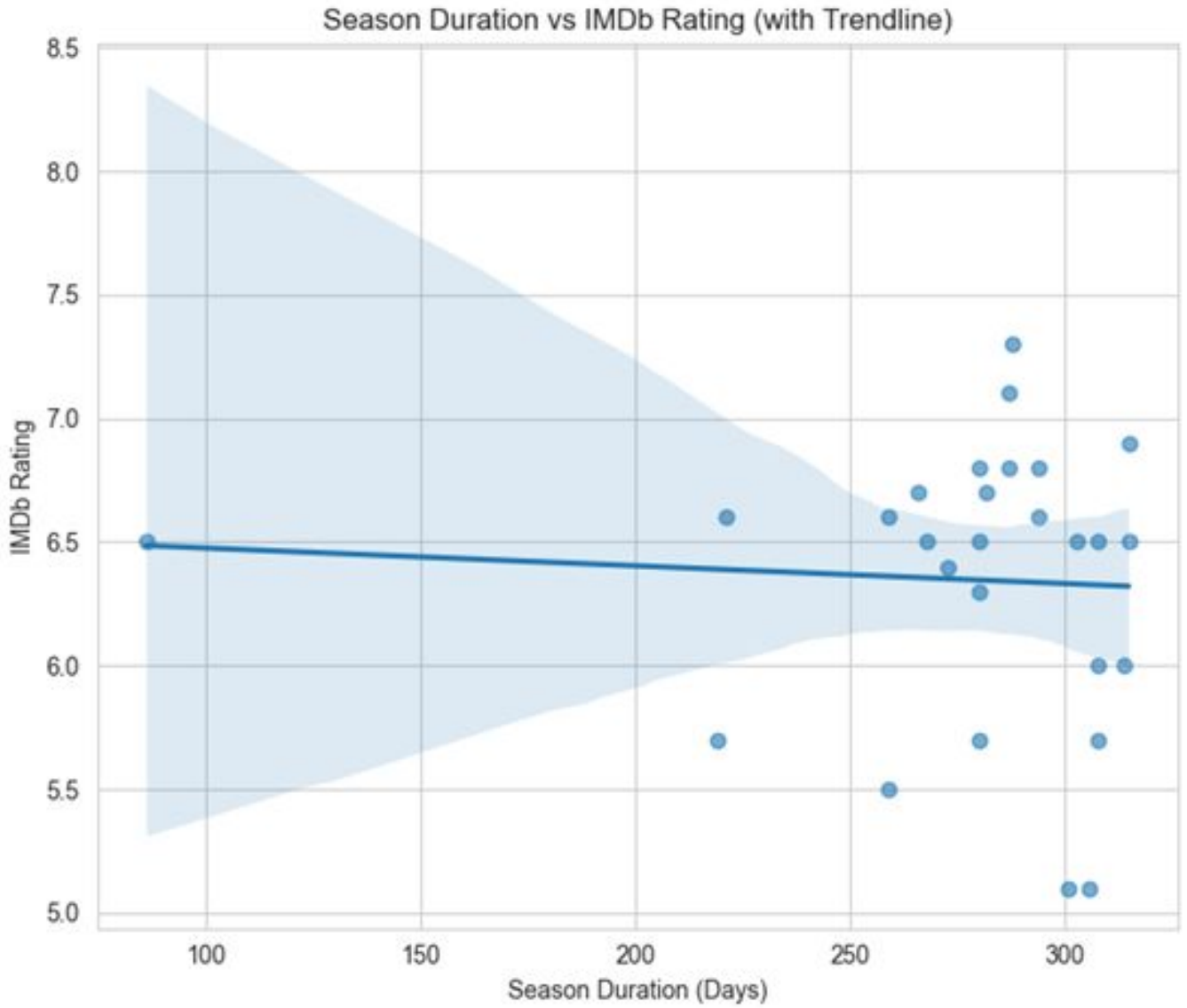


- **Motivation:** Does taking a long break affect hype or drop interest?
- **Observation**: Shows with shorter gaps between seasons generally maintain better audience reception.

Does season duration impact audience reception?

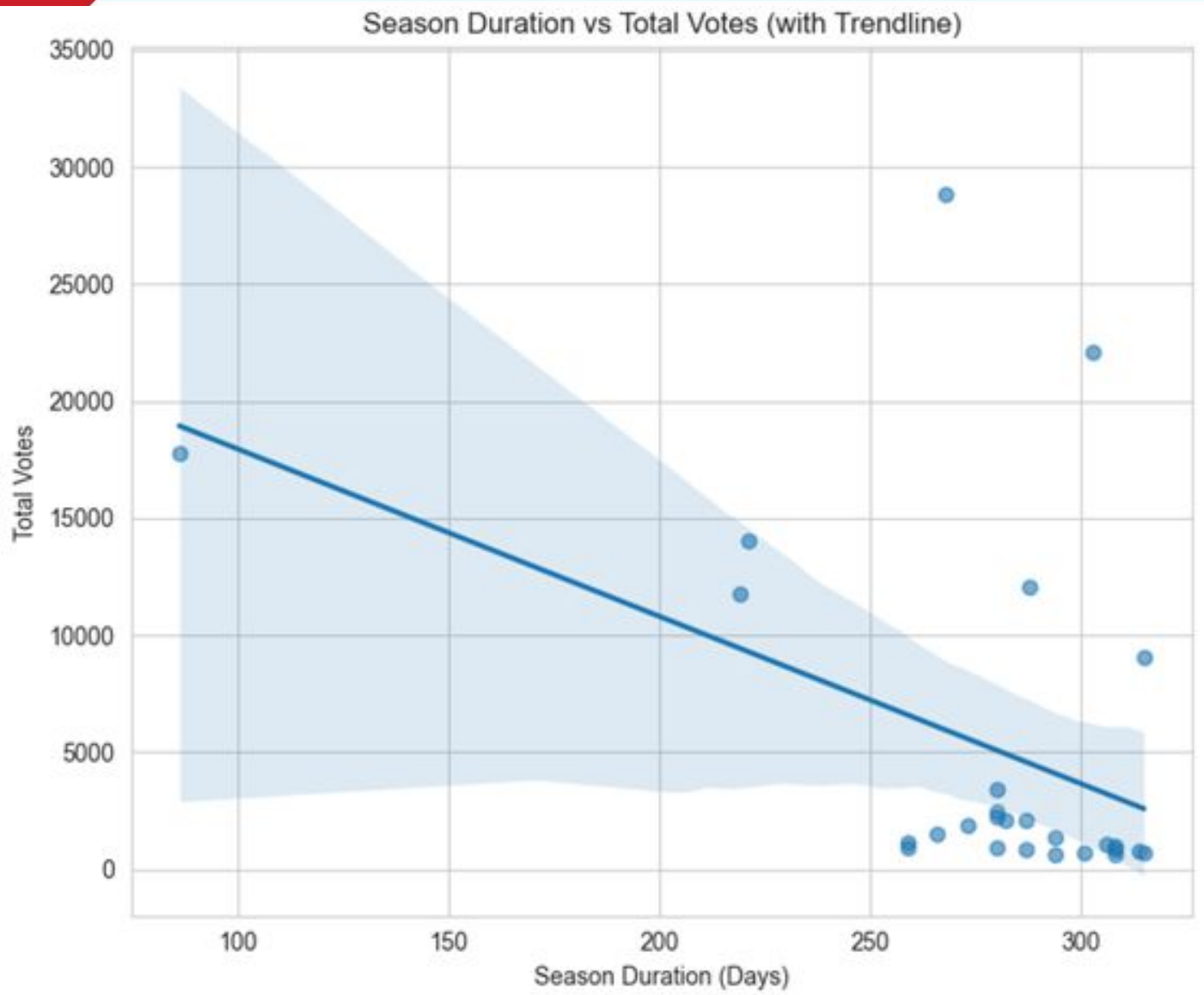
Motivation: Longer seasons could mean more content… but do viewers like that more?

Q1. Runtime Vs IMDb Rating



- **Observation**: The trendline is nearly flat, suggesting season length has little to no effect on audience reception.

Q1. Runtime vs Audience Voting



- **Observation**: Shorter seasons tend to get more votes, while longer seasons generally receive fewer.

Q1: Result Summary

- **What Factors Influence Season Popularity?**
  - Producer ❌
  - Season Length✅
  - Release Time✅
  - Days Since Previous Season✅

- **Season duration does not impact the show's quality but viewers get less engagement.**

Best Season: `In Space` by Saban

Q2. Which characters were the most prominent across seasons?

Q2. Motivation

Challenging Nostalgia Bias: Data vs. Assumptions

The Power Rangers fandom has strong beliefs about character popularity - but do they hold up to scrutiny?

Some Common Assumptions:

"Tommy Oliver Carried the Franchise"

Does he actually:

- Boost ratings when he appears?
- Maintain consistent popularity across seasons?

"Villains Like Rita Drove Engagement"

Is her presence correlated with:

- More IMDb votes?
- Stronger ratings?

Q2. Process

Key Variables Used

From episodes.csv: desc (character mentions)
From seasons.csv: IMDB_rating (season performance)

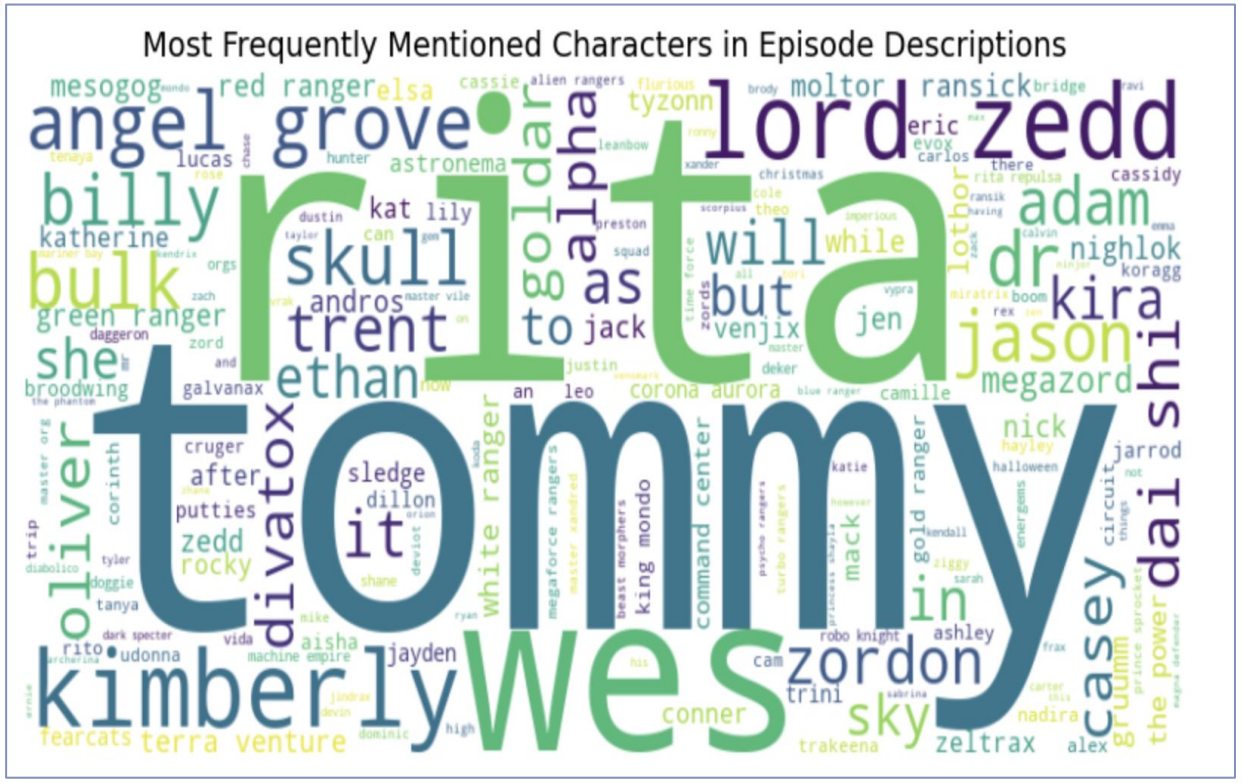
Implementation Steps

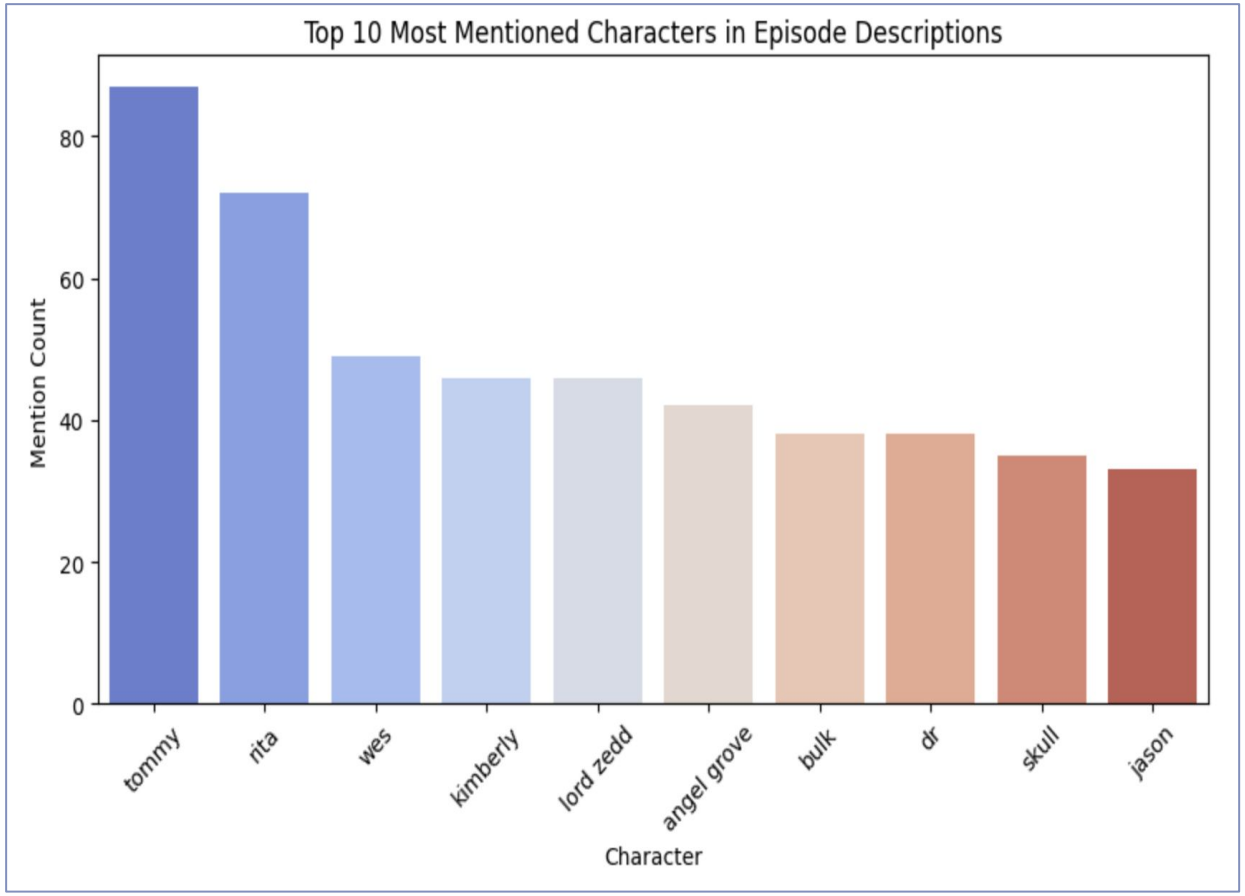
1. **Text Mining**
   - Extract character names from desc using regex (Capitalized words).
   - Filter generic/common terms (e.g., "Earth", “fight”, “defeat”,…).

2. **Character Popularity**
   - Count mentions per season → identify top characters.
   - Merge with season ratings → correlate popularity with performance.

3. **Visualization**
   - Word cloud: Highlight dominant characters.
   - Bar charts: Compare character mentions vs. avg. season ratings.

Q2. Top mentioned characters





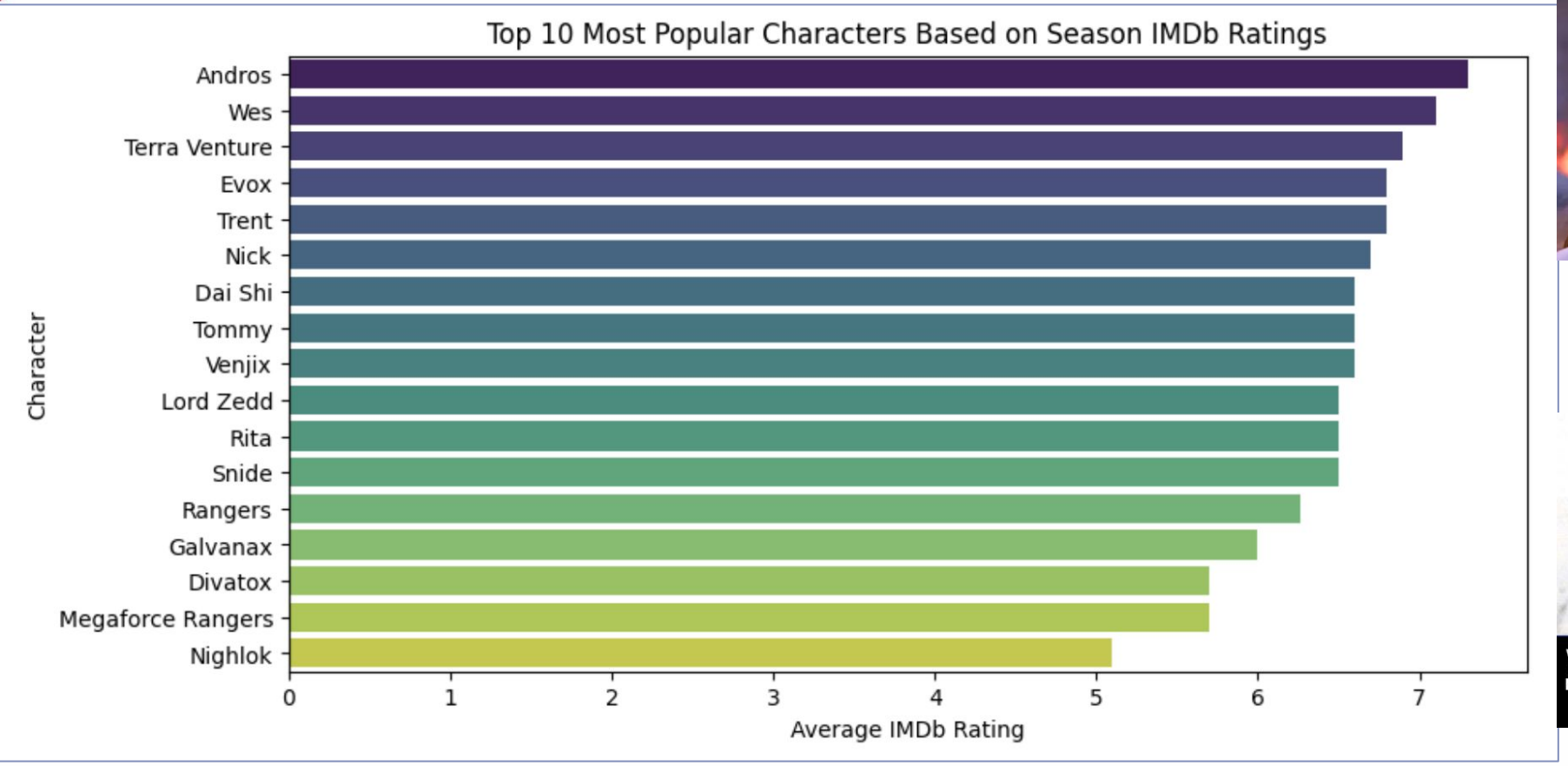
Q2. Most common character in each season

	Season	Most Common Character
0	Beast Morphers (Season 1)	Rangers
1	Beast Morphers (Season 2)	Evox
2	Dino Charge	Rangers
3	Dino Super Charge	Snide
4	Dino Thunder	Trent
5	In Space	Andros
6	Jungle Fury	Dai Shi
7	Lightspeed Rescue	Rangers
8	Lost Galaxy	Terra Venture
9	Megaforce	Megaforce Rangers
10	Mighty Morphin (Season 1)	Rita
11	Mighty Morphin (Season 2)	Lord Zedd
12	Mighty Morphin (Season 3)	Rita
13	Mystic Force	Nick
14	Ninja Steel	Galvanax
15	Ninja Storm	Rangers
16	Operation Overdrive	Rangers
17	R.P.M.	Venjix
18	S.P.D.	Rangers
19	Samurai	Nighlok
20	Super Megaforce	Rangers
21	Super Ninja Steel	Rangers
22	Super Samurai	Nighlok
23	Time Force	Wes
24	Turbo	Divatox
25	Wild Force	Rangers
26	Zeo	Tommy

- Tommy is the most popular character, but was only mentioned the most in 1 season?

- Why does Rangers appear a lot?

Q2. Top popular Character based on IMDB rating



Andros (Season In Space)

Wes (Season Time Force)

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THANK YOU!