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Using Sentiment Analysis to Predict TV Show Longevity

Hello fellow 2nd-year UVA student! Netflix is so excited to have you join their internship program this summer. Your job is to apply your data science and business analytics skillset to inform, drive, and create strategic decisions to guide the production of Netflix Original shows. Your task? To find a relationship (or lack thereof) between TV show script sentiment and how it correlates with show runtime (number of seasons).

Scenario

The rise of streaming has led companies such as Netflix, Hulu, and Disney+ to optimize their platforms to entice customers with new and exciting content, with the ultimate goal of increasing profits and company growth. In 2013, Netflix released their first Netflix Original series, “House of Cards”, and since then have continued to produce Originals. The Original shows have become a core component of the Netflix streaming platform as they reduce costs for the company while being able to tailor content to different regions of their audience all around the world. The series’ have been a smashing success and Netflix wants to optimize Originals production to maintain low production costs, keep their current customers, and attract new customers.

You have been tasked with analyzing TV show scripts (text data) and their respective overall emotional tone to uncover what types of shows garner the most interest for renewal. Do feel-good family shows keep people entertained, or thrilling, edge-of-your-seat storylines? You’ll utilize an open-source sentiment analysis tool called VADER (Valence Aware Dictionary and sEntiment Reasoner) to analyze the text data. Your insights will help shape the future of Netflix Originals.

Mission

Using Python, and data science/analytics, you will:

- 1) Analyze trends and patterns: note any correlations between four sentiment types and shows
- 2) Run statistical testing: Leverage multiple linear regression to understand variable significance (which sentiment types have the most significant impact on runtime)
- 3) Deliver actionable insights: develop a narrative highlighting major findings, conclusions, and next steps from analysis

Deliverable

By the end of this case study, you will produce insights that will help guide the future production of Netflix Original shows. Netflix is counting on you to provide an in-depth analysis of how they can continue to be a competitive force in the streaming world. Access project resources and code here: [GitHub Case Study Repo](#)