**Module 3: Critical Thinking Assignment**

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**Introduction and Background**

In the highly competitive world of digital streaming services, companies constantly seek strategies to increase viewership and profitability while retaining subscribers. The massive growth in streaming consumption over the past decade has intensified the need for platforms to understand what drives audience engagement and revenue. This Capstone Project uses quantitative research to investigate key aspects like the impact of content type, release schedule strategies, and the influence of viewer ratings and online popularity on engagement and profit. Using predictive analytics, this project will help provide data driven recommendations for decision makers within the streaming industry.

**Research Questions**

To guide this investigation, I developed the following research questions:

1. What types of content are associated with higher profitability and increased viewership on streaming platforms?
2. Are there identifiable patterns in release schedules that correlate with sustained platform success?
3. Do viewer ratings or online popularity metrics significantly influence user engagement and profits on streaming platforms?

These questions aim to address both the operational and strategic challenges faced by streaming services that are investing heavily in content production and licensing. Understanding these factors can help platforms refine their content acquisition strategies, scheduling decisions, and interface design to better meet viewer expectations.

**Hypotheses Overview**

Based on the research questions, I have formulated the following hypotheses:

1. Hypothesis 1
   1. H₀ (Null Hypothesis): There is no significant difference in average viewership and profit margins between streaming platforms that invest more in licensed content versus those that focus heavily on original programming.
   2. Hₐ (Alternative Hypothesis): Streaming platforms that invest more in licensed content have higher average viewership and higher profit margins compared to those that focus heavily on original programming.
   3. Answering this question will provide the business’ decision makers with strategies that would increase profits moving forward. For example, based on an article from World Screen, a publication that covers the international entertainment industry: “January [2024] garnered nine of the ten highest daily streaming levels ever, with Saturday, January 13 marking the most-streamed day in history, totaling 40.8 billion minutes streamed–driven by Peacock’s coverage of the first exclusively streamed NFL playoff game.” (Brzoznowski, 2024). This suggests that licensing valuable live or in demand content may provide a competitive edge, but further analysis is required to generalize this effect across the industry.
2. Hypothesis 2
   1. H₀: There is no significant relationship between a consistent release schedule and sustained viewer engagement or subscriber retention.
   2. Hₐ: A consistent release schedule, such as weekly episode releases, leads to more sustained viewer engagement and subscriber retention compared to releasing entire seasons at once for binge watching.
   3. There are differing opinions across the entertainment industry on what strategy is best as Marah Eakin suggested in a Wired article:

“While some industry insiders argue that bingeing is actually better for bringing customers to a streamer’s app—you’ll return multiple times in one week, subliminally absorbing what else is on the service rather than just clicking over once a week for the single program you want—the general public consensus is that “findability,” the act of discovering content on a platform, is almost impossible.” (Eakin, 2024)

This ongoing debate within the industry highlights the importance of understanding release strategies. By examining historical data from multiple platforms, this hypothesis will test whether consistency in scheduling actually translates to better business outcomes.

1. Hypothesis 3
   1. H₀: Viewer ratings and online popularity metrics have no significant correlation with viewership levels or profit margins.
   2. Hₐ: Viewer ratings and popularity metrics, such as Rotten Tomatoes critic scores or Letterboxd reviews, are positively correlated with viewership levels and profit margins.
   3. Viewer ratings and critical acclaim are often leveraged by platforms as promotional tools. Business Insider, the wide known publication, publishes lists of the most popular weekly streaming television shows in the United States. In one of these posts from April of 2021, they analyzed the demand for the TV show and compared it to the Rotten Tomatoes critic rating. It was very interesting to see that one of the most in demand shows, The Handmaid’s Tale on Hulu, at 26.1 times more in demand than the average show, only had a 56% score on Rotten Tomatoes (The Business Insider, 2021). This would lead me to believe that ratings have less baring on popularity than we would think. This project will assess whether these popularity indicators significantly drive actual engagement and revenue, or if they merely serve as superficial marketing tools/numbers.

**Research Methods**

To test these hypotheses, a quantitative research approach using predictive analytics will be employed. The methodology will include descriptive statistics, correlation analyses, regression models, and hypothesis testing through t-tests or ANOVA where applicable.

The research will utilize secondary data gathered from sources like Kaggle such as viewership trends, publicly traded company earnings statements, content library lists, and ratings from established platforms like Rotten Tomatoes and Letterboxd. I will also utilize simulated data that observes a fictitious telecom company’s contracts and user pool.

I will use the following tools and models:

* SAS Studio: SAS Studio will serve as the primary tool for data cleaning, transformation, and conducting advanced statistical tests, such as multiple linear regression and hypothesis testing.
* Microsoft Excel: Excel will be used for preliminary data organization, summary statistics, and simple visualizations that assist in the initial exploration of trends and anomalies.
* Tableau: Tableau will help create interactive dashboards and visualizations to effectively communicate findings to stakeholders, allowing for clear presentation of trends, correlations, and model outputs.

For example, the use of a tool like correlation coefficients will determine the strength and direction of relationships between viewer ratings and actual viewership figures, while using regression models will help test whether variations in profit margins can be explained by content type or release strategy.

**Ethical Considerations**

Given the sensitive nature of data in the entertainment industry, strict ethical standards will be followed throughout this project. These include:

* Privacy Protection: This project will not involve the collection or use of any personal or confidential user data. All data will be aggregated from publicly available sources.
* Data Source Credibility: Only reputable and verifiable sources will be used to ensure the integrity and accuracy of the analysis.
* Transparency: Research methods, statistical models, and data sources will be fully documented and disclosed to allow for reproducibility and verification.
* Bias Mitigation: Special attention will be given to identify and address any potential biases in the data. For instance, data that overrepresents specific regions or demographics could skew findings. This will be controlled for during analysis when possible.

By adhering to these ethical considerations, the research will maintain high standards of integrity and respect for privacy, aligning with the broader ethical principles that guide data driven decision making.

**Conclusion**

The results of this Capstone Project aim to provide actionable insights for streaming platforms that face increasing competition and evolving audience expectations. Understanding which types of content, release patterns, and viewer feedback mechanisms drive profitability and sustained engagement will help platforms optimize their content strategies and improve their competitive positioning in the market. The platforms need a boost, as Alex Weprin, a journalist with the Hollywood Reporter, noted in his 2023 article:

“Netflix now finds itself atop the subscription streaming heap, ending 2022 with 231 million paid subscribers and $5.6 billion in profits. […] The rest of the industry, meanwhile, is looking at 2024. That’s when Disney, NBCU, Paramount and WBD all say they expect — or at least hope — to swing to a profit in their streaming businesses.” (Weprin, 2023).

While Netflix is very profitable, almost all other streaming platforms have not even gotten out of the red. In order for them to continue to produce and hopefully one day see success, it is important to determine the factors that have helped profitable companies like Netflix get there.

For example, if the analysis supports the hypothesis that licensed content generates higher average profits, streaming services may consider balancing investments between costly original productions and high demand licensed media. Similarly, if the research finds that consistent release schedules prolong subscriber retention, platforms can adjust their launch strategies accordingly.

Finally, validating the impact of viewer ratings and online popularity will clarify whether highlighting these metrics within the user interface meaningfully contributes to viewer decision making and engagement, informing future platform design and promotional strategies.

**References**

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