Twitter and customer needs: Can Data Analysis serve as a tool for strategy and innovation to improve Netflix users' experience and expand the Netflix brand?

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ABSTRACT

Companies must recognize the need for innovation and assess customer feedback if they wish to improve and develop. Thus, industry giants Netflix may need to take a step back, and look at the bigger picture. Netflix must analyze what users need, and how to respond to these needs in order to improve their streaming platform and their customers' experience. However, it may not always be clear which need may be relevant. A needmining approach, based on Kühl et al., (2016), must be used and adapted to Netflix's case, such that relevant and possibly innovatory ideas can be extracted. The manual coding provides different categories of needs and ideas Netflix could follow to keep up or even overtake their competitors. Thus, after filtration, 9.796 tweets were used as the data set, of which 24% were coded to represent a general customer need. Moreover, innovatory ideas were identified that could add to Netflix's current strategy and provide new paths to follow. The BERT algorithm proved the reliability of the needmining method with great precision and recall results. However, further research could serve useful to compare differences between streaming giants' customer needs, as technology advances and natural language processing algorithms become more efficient.

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Keywords

Big data, data analysis, social media, customer needs, user needs, innovation, user experience, strategy, needmining, data mining, Netflix, Twitter

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1. Introduction

1.1 Research Situation

Netflix is a video streaming service provided in exchange for a certain monthly fee. With over 220 million subscribed users (Statista, 2022a), Netflix was the company that popularized movie streaming services worldwide (Morgan, 2021). The company has also produced many series and movies of their own such as El Camino, The Witcher or the widely popular Korean drama series Squid Game. However, this has been with its fair share of ups and downs, as not all Netflix productions have been as successful as Netflix may have hoped. This can also be noted with Netflix's recent loss of subscribers for the first time in 10 years, which may have been the result of their crackdown on password-sharing through multiple households, the Russo-Ukrainian war, the possibility of price increases (Chmielewski & Datta, 2022), and the confirmation of establishing a cheaper version of the streaming service that would run advertisements being introduced by the end of the year 2022 (Shaw, 2022).

The company needs to know what people think about their platform, the actions they take, or the movies they produce. A rating system has already been implemented within the application itself, but social media platforms such as Facebook or Twitter allow people to describe in much more detail what they think, not only about a certain movie or series, but also about Netflix as a whole. Netflix is surrounded by competitors such as Hulu, Amazon Prime, Disney+ or Paramount+, and as time goes by, it seems that more and more of these competitors find a spot within the streaming market. Thus, the movie streaming industry is becoming more and more saturated, and Netflix may need to distinguish itself from its competitors to keep its top spot.

Twitter is a social media application where people can write public messages known as "tweets", which are characterized by their hashtags and 280-character limit (previously increased from 140 in 2017). Twitter also provides free data through their API, which means Netflix can easily gather people's thoughts about certain movies, series, or the company itself. Twitter is also one of the most popular social media platforms worldwide, with 400 million users, half of which access the website daily (Dean, 2022). Over 75 million of these 400 million users are from the US (Statista, 2022b), which is also Netflix's largest audience (Statista, 2021), making Twitter a great social media platform from which to extract and analyze people's thoughts and needs.

1.2 Research Objective & Research Question

Our objective is to understand Netflix users' needs and requests. There is currently a gap between social media and customer needs, as not each company may be able to find the right balance when thinking about relevancy of customer inquiries and requests. This paper will formulate ideas Netflix could use to improve and innovate their platform, all while keeping up with competition and responding to customer needs. Thus, an algorithm can be fed free Twitter data from Twitter's API, which would allow us to understand what people think of Netflix and analyze how user requests can be implemented within Netflix's strategy. To achieve this, one possible research question comes to mind, which can be written down as two sub-questions:

How can Netflix use adequate Twitter feedback for improving and further innovating their current streaming platform?

- *How can Netflix identify useful tweets and differentiate between the more and less useful ones when searching for feedback?*
- *What type of innovation can Netflix generate based on the useful feedback?*

2. Theoretical Framework

The focus of this paper is on the coding of Tweets and recognition of customer needs, which allows the innovation management process within Netflix to take place. To achieve this objective, distinguishing useful Tweets and analyzing user needs and requests from Twitter will allow us to think of ideas that Netflix can use to improve their streaming platform. Thus, it is important to think about customer needs, as customers are very important stakeholders and can play a large role in the success of the platform. However, the innovation process shouldn't be forgotten, as this market has become very competitive, and potential users may not be willing to pay monthly for too many streaming services, hence the use of feedback for innovation. To achieve these objectives, a certain number of theories and skills may be used:

- Excel. Used for creating graphs or tables regarding Twitter data, as well as for the manual coding process, including the filtering and labeling of Tweets.
- Netflix organization theory and strategy. Used to look at Netflix's current strategy, their strategy for the future, and how Netflix itself can respond to feedback.
- Innovation management. Used to explain the ideas Netflix can use, the directions they could take, and the consequences that may result.
- Opportunity recognition. This is the foundation of entrepreneurship, but still applies to large companies, as there is always need for growth and improvement; recognizing which possibilities can be taken advantage of needs to be discussed.

The results within this paper will be split into two major sections. The first part will look at the results of the manual coding of the Twitter data, provide some innovatory customer requests, but also some algorithmic predictions to assess the effectiveness of our model. The second part will discuss; it will take these innovatory requests, create, and propose different directions Netflix could follow, while in accordance with their current generic competitive advantage strategy (Moore, 2019). However, it is important to analyze if an opportunity is worth taking in the first place, as not each path may be as fruitful as the other. Each part responds to its respective sub-question and utilizes different knowledge, skills, and

literature to explain the process of using big data to innovate.

3. Literature Review

Articles used in this paper were found through Scopus by alternating different combinations of the keywords "Netflix", "feedback", "Twitter" and "innovation". The most cited and relevant articles seemed the most interesting to use. Some articles were already provided or found as citations within other articles. Other sources include websites and news articles to explain Netflix's current situation, or to provide statistical data. Rigorously analyzing these sources will allow us to think about some of the keywords that define this paper: social media, innovation, big data, and customer needs.

Step	Process
Defintion	Terms must be defined to get an initial grasp of the domain.
Explanation	Why is this field important and how will it help within this project?
Scope	To what extent do we delve within this field and how is it perceived?
Summary	A general summary of the articles involved, how they are relevant within the paper and how the paper itself will contribute to the field.
Conclusion	How can this be used within the Netflix case?

Figure 1. Literature review process, based on Liberty University, n.d.

3.1 Social Media

Social media is a group of internet-based applications that build on the foundations of Web 2.0, and allow the creation and exchange of user-generated content (Kaplan & Haenlein, 2010). The beginning of the 21st century is characterized by the rise of social media, as more and more people get access to an internet connection (Misopoulos et al., 2014). It is important to distinguish social media from the old web, as nowadays it is much easier to make, publish and share content than it has ever been before (Misopoulos et al., 2014). Social media has transformed the way companies communicate with consumers, but has also made the customers' calls much more vocal than ever before (Grégoire et al., 2015). Thus, it is important for companies to be able to respond to consumers in a timely manner through social media, as this represents an opportunity to rectify complaints and gather new ideas, but also has the added risk of fueling a crisis even more (Grégoire et al., 2015).

The scope of social media within this paper is limited to Twitter and coding tweets that have been tweeted in the past year at Netflix's customer support account, as this is the platform that will allow us to identify customer needs through the coding process.

Interactions on social media websites such as Twitter can affect one's thinking and behavior (Fischer & Reuber, 2011), and thus also alter customer needs and wants. This means that companies need to be able to communicate clearly with their customers in order for social media to be beneficial for a firm (Fischer & Reuber, 2011). Customer insights are easier to obtain than ever before; data, whether structured or unstructured, can be made out of many different formats, such as images, text, or video (Roberts et al., 2016). These types of information increase the diversity of obtainable insights, which can be analyzed faster than ever before (Roberts et al., 2016). Companies can choose to create hype around certain new features, but must be careful about the Gartner hype cycle and possible disappointment that may ensue (Fenn & Raskino, 2008), as many companies can still struggle with effectively using social networks for processes such as market research (Roberts & Candi, 2014).

Social media will undoubtedly continue to be relevant for the upcoming years as it keeps on growing. Thus, it will become more and more important to be able to create attention around innovation through the use of social media. However, if customers aren't listened to, this could backfire, and the firm could end up being held accountable. Netflix itself has been through its fair share of controversies in the past, and as their subscriber count diminishes for the first time in 10 years, Netflix needs to find new ideas to revitalize their current platform if they wish to keep their top spot.

3.2 Innovation, Strategy & Technology

> "Innovations imply, by virtue of their nature, a big step and a big change ... and hardly any 'ways of doing things' which have been optimal before, remain so afterward."
>
> *- Joseph Schumpeter*

Innovation can be separated into two categories; innovation from data (IFD) and innovation as data (IAD) (Rindfleisch et al., 2017). IFD is defined as "a centralized, firm-led process in which firms use digital tools to acquire, analyze, and act on consumer data to enhance their innovative offerings", while IAD is defined as "a decentralized, consumer-led process in which consumers use digital tools to acquire and/or generate data to create their own innovative offerings." (Rindfleisch et al., 2017) It is important to distinguish between the two, as the coding, data analysis, and innovation process within this paper will involve consumers (in our case, Twitter users tweeting towards Netflix's customer support account) as passive data providers (IFD).

Figure 2. Innovation from Data vs. Innovation as Data (Rindfleisch et al., 2017)

Key Characteristics	Innovation from Data	Innovation as Data
Role of consumers	Consumers act as passive data providers and new product purchasers	Consumers act as data generators and empowered new product creators
Relevance of firms	Firms are solely responsible for acquiring, analyzing, and acting upon consumer data, and thus, are highly relevant	Consumers are actively involved in acquiring, analyzing, and acting upon data, thereby decreasing the relevance of firms
Nature of products	Products are closed format and hard to modify because consumers only have access to their physical form	Products are open format and easy to modify because consumers have access to their digital form

The innovation field has existed since the dawn of time, as each new piece of knowledge can create new ideas, and each new piece of technology can be improved upon. However, the field is always evolving, and not just entrepreneurs have to be innovative, but large firms as well. For example, firms need to be creative in the way they use social media to attract customers and respond to their queries (Fischer & Reuber, 2011). This would allow us to think about innovation within the context of Netflix and their strategy.

The word strategy has its roots in the Ancient Greek word '*strategos*', composed from the words for 'army' and 'I lead'. However, a good general must always make sure they are not leaving anyone behind. Stakeholder theory suggests that not only shareholders have interests; stakeholders such as employers, customers, suppliers and many other groups' interests also need to be taken into account (Freeman et al., 2010). This means that consumers need to have their voices heard, and feedback on social media platforms can be a source of innovation for firms (Bertschek, 2017). However, innovation can mean the innovation of anything; no large company has reached its peak through product innovation alone (Sorescu, 2017). Innovation can be much more data driven (Kusiak, 2009) and focus on the digital world as well, which is crucial when thinking about an innovation approach for Netflix. Digital innovation is the use of digital technology during the process of innovating and can be used to describe the outcome of innovation (Nambisian et al., 2017). Digital technology has nowadays become an enabler of innovation and must be considered within the innovation process (Urbinati et al., 2018).

Technology advances at an exponential rate – *see Appendix 1* – however, it can also be disruptive; as new technology replaces old technology, innovations last less and less time, meaning there will be faster need for change. Netflix can't keep the status quo if it wants to stay ahead of its competitors, and this paper will study how customer feedback, through the analysis of data, can provide the needed ideas for innovation.

3.3 Big Data as a tool for analysis

Big data is any set of data, most often unstructured, whose size is beyond the ability of traditional databases, and thus requires large capabilities in terms of capturing, storing, managing, and analyzing (Kaisler et al., 2013; Drexler et al., 2014). As technology advances and triggers need for change, digital innovation and technologies become more and more important and prevalent (Brunswicker et al., 2015). The term 'big data' was coined in the early 1990s and popularized by John R. Mashey at Silicon Graphics (Firican, 2022), and as storage and data sizes grow, the scope can only get larger.

Big data can easily be diffused through smartphones, computers and other digital technologies made possible by the 'Internet of Things' (Trabucchi, 2018). The IoT is "a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies" (ITU, 2012). Data can thus be used to create innovative solutions when business opportunities arise (Del Vecchio et al., 2018). Therefore, large corporations such as Netflix must also use big data to take advantage of trends and other opportunities. In order to achieve this, companies need to be able to access, diagnose and integrate information that has been gathered through different sources (Urbinati et al., 2019). In our case, customer needs can be analyzed through the coding process after acquiring all the necessary data, which would allow us to think of innovative solutions and capture value from big data. Nowadays, companies are integrating powerful big data analysis and general data mining tools within their organizational process (George & Lin, 2017), making this analytical process crucial for survival. However, this also leaves the door open for new methodologies of data analysis (Karimi-Majd & Mahootchi, 2014).

Big data is still quite new and still has much time to grow in the future, meaning that this research field can only evolve. This paper will use big data to analyze customer needs through Twitter. However, in order to open the door for change, a methodology for analyzing customer needs within tweets must be established. Thus, the coding process will yield results that can further be analyzed and used as innovatory ideas, which Netflix could implement within their own strategy.

3.4 Customer Needs

Customer needs emerge when a certain product or service is needed by several people, and a company or individual is willing to provide it.

Based on Qazzafi, 2019, consumers recognize the required need and start their research to find the highest quality and best prices on the market, which allows them to compare alternatives. The consumer will ultimately make a decision and purchase one of the possible choices. After some time of owning the product or having received the service, the consumer will form an opinion about it, either positive or negative, which will influence their future buying behavior. If the experience was positive, the consumer will be more likely to return. If the experience was negative, the consumer may start avoiding the company due to past experiences, as some consumers rarely offer second chances. Thus, it is important to present a high-quality product or service to possible clients from the beginning, in order for them to continue buying your brand. Netflix must offer the same high quality within the context of their streaming service if they want to keep their current audience away from competition.

The global market is characterized by fragmentation and heterogeneity (Nambisian & Zahra, 2016). This means that fluid and rapidly changing consumer needs are essential to analyze in order to capture opportunities in real time. (Nambisian & Zahra, 2016). It is often said that 'the customer is always right'. Making sure customers are treated respectfully and provided with what they desire is of the utmost importance for any company. Thus, one of the most important challenges for answering and satisfying customer needs is understanding them from the get-go (Kühl et al., 2019a). Customer needs must be monitored and processed in order to see which are the most relevant (Kühl et al., 2019b). This can be achieved

through a process called needmining, which aggregates needs and "evaluates the feasibility of automatically identifying customer needs from social media data" (Kühl, 2016; Kühl & Goutier, 2018). A methodology is then needed to standardize the process of needmining. Empirical insights can be acquired from a platform such as Twitter, which provides feedback from customers on products and services (Kühl et al., 2019a). This will be done by coding tweets relating to Netflix and applying a natural language processing algorithm in order to extract the most relevant data.

3.5 Summary

In conclusion, establishing a methodology will allow us to understand how social media data can be analyzed and how big data can impact digital innovation and strategy. This analysis will directly result into a set of useful and less useful tweets, the former describing the needs and requests of customers that can provide Netflix with new ideas. This methodology will serve as the foundation for the innovation process, which will make it possible to understand how Netflix can implement innovation based on its customers' needs in order to remain ahead of its competitors.

4. Methodology

The foundation for our methodology will be the needmining approach based on Kühl et al., 2016, which will also include the coding and analysis of tweets directed at Netflix's customer support account. There are multiple steps that need to be followed to properly mine needs from tweets; data must be retrieved, filtered, labeled, and then processed by an algorithm which will identify its own set of needs from the same data.

Twitter provides us with a large amount of data through their API, however not all of it will include customer needs. Around 15.000 tweets will be retrieved and filtered, of which the remaining tweets after the filtering process will be coded manually. The AI will use half of this new data set for the learning process, and the other half for its predictions. Since tweets directed at Netflix's customer support account are being used as the source of our data, our results are expected to contain a fair number of tweets that involve customer needs.

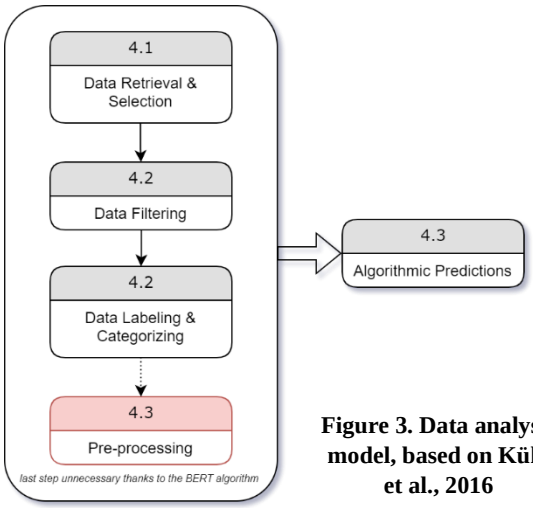

Figure 3. Data analysis model, based on Kühl et al., 2016

4.1 Data Retrieval & Selection

Data Retrieval is the process of acquiring data from the platform. Twitter is used in this paper since it has a constantly updating data pool that grows larger and larger as more and more tweets are tweeted every minute (Kühl et al., 2016). While the data is free, acquiring it must be done through Twitter's API. Tweets directly tweeted at Netflix's customer support account, thus including "@Netflixhelps", have been chosen, since it is more likely to find customer needs within these tweets than if keywords were used; e.g., Netflix and its spelling variations, or currently popular Netflix shows. Therefore, this process will provide us with real-time data without the need for keywords. This means that our chosen data set will include tweets directed @Netflixhelps in the past year, more specifically from 01/04/2021 until 31/03/2022.

4.2 Data Filtering, Labeling & Categorizing

Data Filtering is the process of removing tweets according to certain criteria. In this case, the criteria will be:

- The language. The focus should be on tweets written in the English language.
- The length of the tweet. Tweets under or equal to 50 characters are very unlikely to contain useful information.
- URLs. Tweets that include URLs will be removed, as this can mislead the machine learning algorithm in its learning process, and are also unlikely to contain needs.
- Duplicates. Retweets and duplicated tweets are repetitive and do not add any new information.
- Tweets with certain keywords: this includes the following list: sale, promotion, deal, win, trial, gift, contest, discount, as well as their plural forms, since these tweets will likely not provide much feedback.
- Spam and other miscellaneous tweets. This can include, for example, other duplicated tweets that had not been detected automatically due to only one or two characters being different, or tweets that were identified as English although they were in another language. This process is done manually while coding, as these tweets can only be identified by being read.

After filtering through all of these requirements, the remaining data will be manually labeled in order to identify which tweets contain a need. This can be done by only one individual, but might also be more subjective as a result. Coding each result means attributing a value of 0 for tweets which are not considered needs, and a value of 1 for those which are considered needs. The identified needs can then be separated into different categories and subcategories, analyzed, and used to think of possible innovatory ways Netflix can use to keep up with its competition.

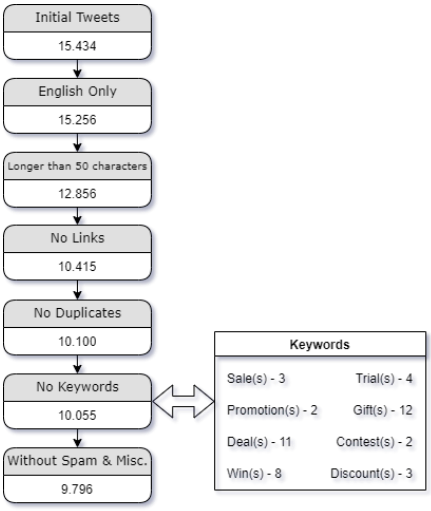

Figure 4. Tweet filtering process

4.3 Pre-processing & BERT Algorithm

In Kühl et al., 2016, pre-processing refers to the use of each resulting tweet as a "bag of words", where all of the words from all of the tweets are counted. For instance, if the first tweet contains the word 'ten', the respective cell will be marked down as 1, and if the next tweet does not contain the same word, its cell will be marked as 0. This process also includes removing stop words, downcasing, stemming, and tokenization. However, the advantage of using the BERT algorithm is that there is no need for the pre-processing step.

BERT is an open-source machine learning program used for natural language processing, which stands for Bidirectional Encoder Representations from Transformers. Its distinguishing design feature is its connectivity; bidirectional representations are trained through unlabeled text while taking into account all context layers (Devlin et al., 2019). This means that every output element is connected to every input element, as the algorithm is trained through these connections to help computers decipher ambiguous text by using the context of surrounding words to establish meaning (Lutkevich, 2020).

The algorithm's predictions will follow a similar process to the manual coding by identifying tweets it considers needs and giving them a value of 1, while tweets that it does not consider needs are given a value of 0. Thus, the algorithm can be used to make predictions by using half of the manually coded tweets as training data, and coding the other half itself. The result of this process will yield four values: accuracy, precision, recall and F-score, which will indicate how well this process has functioned and if actual needs were successfully captured by its predictions.

5. Results

5.1 Manual Coding

After all remaining 9.796 tweets were coded, around 28% of the tweets contained a need. Due to possible human error, the tweets containing needs were read once more to make sure that they did indeed contain a need, leaving us with a final result of 24%, or exactly 2.400 tweets containing a need.

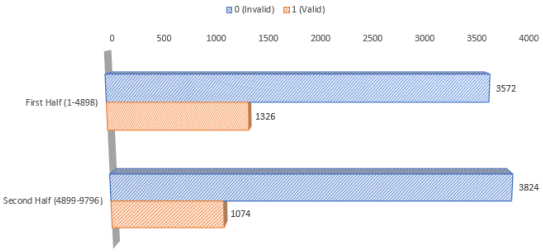

Figure 5. Number of valid and invalid tweets regarding user needs, per half

Each tweet was also given a broad category, which was further divided into different subcategories in order to separate each need; *technicalities* (includes audio, autoplay, general technical issues, loading, video, wrong order, and audio/video), *show-related* (includes censorship, content, geographical, disappearing shows, show requests, and subtitles), *security* (includes payment and security), and *others* (feature request, support, and tweets which didn't fit into any other category).

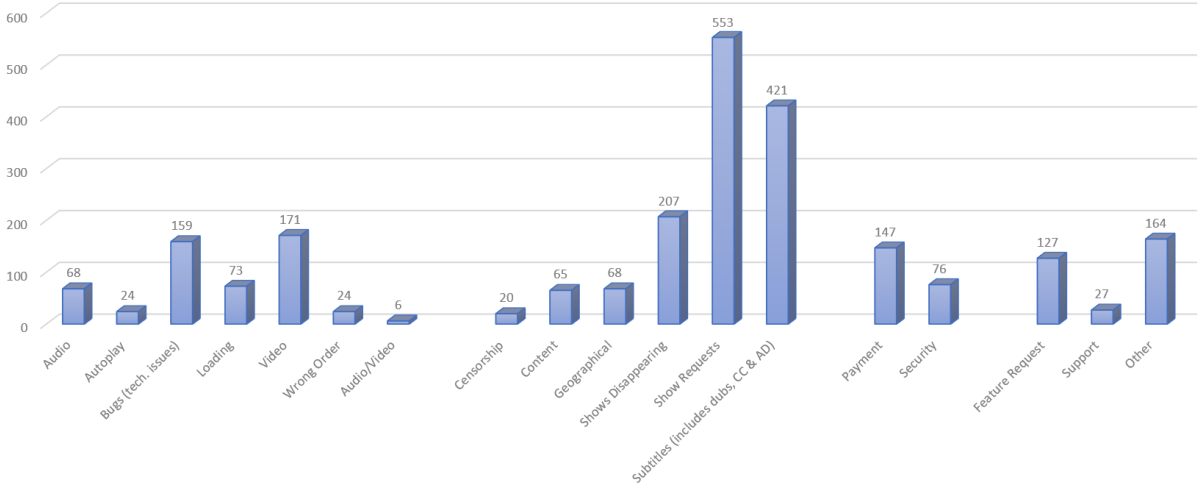

Figure 6. Categorized user needs

As previously stated, customer needs "emerge when a certain product or service is needed by several people, and a company or individual is willing to provide it." This means that the tweets counted as customer needs represent problems that Netflix can solve in order to settle a customer's request and improve their own platform. This can include a number of things such as requests for missing shows or subtitles, removal or addition of certain content, or fixing common technical issues. However, for example, a user asking for help because they can't access their account isn't counted as a need, since it is a minor problem that can easily be solved for each individual client and wouldn't improve the platform. Thus, the identified categories can all be described to better understand what each one entails:

5.1.1 Technicalities

Audio – these needs usually involve a customer requesting the addition of different audio options, such as 5.1 surround, for different shows that might be missing them, or simply the need to fix audio issues.

Autoplay – this feature seems to disappear and reappear often enough that it causes problems for the user's viewing experience, but this category also includes requests such as being able to turn autoplay on and off at will, or have it turned off entirely by default.

Bugs – these are more general technical issues that didn't fit in any of the other sub-categories within 'technicalities'. Solving these issues would generally improve customer experience.

Loading – one of the reoccurring requests during the coding process was to solve the issue of the loading bar being stuck at 24% when starting a show. This category also includes loading issues regarding the Netflix application itself, and other miscellaneous loading-related requests that would improve customer experience.

Video – this category includes requests for better image quality for specific shows, and requests for solving visual bugs. A significant number of tweets from many different users during a certain time period are also included, as many of these users simultaneously faced the issue of black screens with audio and subtitles still working.

Wrong Order – a specific category for an annoyance which can disturb the pleasure of watching a series.

Audio/Video – this rather small category is solely for tweets that mention both audio and video related needs within the same tweet.

5.1.2 Show-related

Censorship – some users were displeased with the fact that some films or shows were given wrong ratings, or weren't on the children's section within Netflix, while others requested the opposite, asking Netflix to remove censorship in order to get the full experience of a certain film or show.

Content – some users were conflicted with the idea of paying for Netflix, while the platform may provide material that they may personally disagree with. This category reflects the tweets of users requesting certain shows, movies, or specials to be removed or altered due to the content that was displayed. This category also includes requests for improving the overall quality of shows displayed on Netflix's catalogue.

Geographical – this category reflects users' needs regarding the issue of having access to different libraries depending on geographical location.

Shows Disappearing – films and shows on Netflix seem to disappear without warning very often. Some may come back after a few minutes or a few months, but some are seemingly gone forever, with no option for a "leaving soon" category to watch them one last time before they're gone.

Show Requests – by far the most common type of need, users often want to see shows on Netflix that have either not been picked up or been abandoned by other streaming services. Many also ask for shows to be renewed and for more seasons to come, but also ask when these new seasons may become available.

Subtitles – this category also includes dubbings, closed captions, and audio descriptions. These can often be missing or incorrect, which can reduce the quality of the service provided, as not every user that wishes to watch a certain film or show speaks the language it was filmed in, and would thus require accurate subtitles. Some users may also prefer shows or cartoons to be dubbed, while missing or wrong closed captions can affect the experience of hearing-impaired people, and missing or wrong audio descriptions can affect the experience of visually-impaired people.

5.1.3 Security

Payment – many people who wish to sign up don't use the payment system options Netflix provides, which means Netflix is potentially missing out on customers willing to sign up to their service. Others may request answers for being charged more than once, or may request extra payment options such as a yearly subscription.

Security – many users have noticed a lack of security with payment details and account safekeeping in general, as Netflix does not require two-factor-authentication or any other additional steps to log in.

5.1.4 Others

Feature Request – this category includes potentially innovatory features that users request in order to have a more pleasant experience with the streaming service. This can include entirely new features, or bringing back old features that have been removed.

Support – a user's experience with customer support can differ from individual to individual, some users requesting for better overall support from Netflix.

Other – this category includes requests and needs that did not fit into other categories.

Examples for each category are included in Appendix 2. These categories show what users request most often from

Netflix, and with exactly 2.400 manually coded tweets that reflect user needs, it seems as if Netflix may always have new features to add, but also issues to fix in order to improve their platform and the user experience. The two largest categories are related to adding more shows and writing accurate subtitles. Another important category to think about is 'feature requests', as this could directly provide innovatory ideas Netflix could start implementing within their application. All in all, many of the user needs focus on the shows they bring onto their platform, as well as the need to properly subtitle them. Fixing technical issues is a must for a pleasant viewing experience, however, people may be less willing to sign up for a service in the first place if they knew their accounts may be vulnerable. Thus, Netflix must proceed with care, but must also think of innovations to keep their existing customer base happy, as well as attract new customers in general.

5.2 Possible Innovation Ideas

With 2.400 manually identified needs, some 200 tweets stood out as they either requested a feature or possible innovation that could help Netflix get on the same level as their competitors, or even outshine them. These innovations can be categorized into two classes; small fixes that would improve the quality of life, some of which are already offered by competitors and would allow Netflix to be on the same level as them, and large fixes that would allow Netflix to innovate, expand, and go one step further than their competitors:

Small fixes include:

- The ability to turn some settings on or off at will, such as the 'are you still watching' pop-up, or the 'skip intro' and 'skip credits' buttons.
- The ability to add a 'preferred languages' setting in order to either select movies in that language, or to receive subtitles in that language, as subtitle language often changes with location.
- The ability to randomize the order episodes play in, much like cartoon episodes on TV, which are often in random order.
- Being able to transfer a profile to a new account to keep watch history intact.
- Subtitle customization (size, font, color, etc.).
- The addition of a yearly payment plan option.
- The addition of a "leaving soon" category for shows who will no longer be on Netflix for the foreseeable future.
- Netflix Party: a removed feature that allowed people to watch the same movie or episode of a series synchronized on different TVs.

Large fixes include:

- Integration with Apple TV and expanding to more platforms such as MacOS or the Nintendo Switch – the last of the big three current gaming platforms without a Netflix application.
- Refining their library; a common complaint is that Netflix chooses quantity over quality when deciding which shows to produce or to host on their streaming service.
- The addition of RuPay, GPay, and Amex cards as payment options in order to focus on the Indian market.
- Increasing security, as many people seem to have their accounts broken into and their payment details and billing plans altered without their knowledge.

Examples for these ideas are included in Appendix 3. The issue of geoblocking still pertains, which many users seem to complain about; it can often be disheartening to look for a show and then realize it is available in other countries, but just not yours. However, due to many factors such as copyright, licensing or pricing, producers often limit the locations to which their content can be displayed.

5.3 Algorithmic Predictions

User needs were identified manually, however, an algorithm may prove itself useful in assessing our model's efficiency by differentiating useful and less useful data itself. As was mentioned before, subjectivity can play a large role in the coding of tweets, as all 9.796 tweets were coded by one person. The BERT algorithm was introduced as a state-of-the-art natural language processing algorithm that makes predictions by learning from training data. When applying the BERT algorithm to our coded data, the following result is obtained:

	precision	recall	f1-score	support
0	0.92	0.90	0.91	3698
1	0.71	0.74	0.73	1200
accuracy			0.86	4898
macro avg	0.81	0.82	0.82	4898
weighted avg	0.86	0.86	0.86	4898

Figure 7. Results of the BERT algorithm's predictions

Accuracy measures overall performance on the test data. Accuracy is measured by counting the number of correct observations divided by the number of total observations. In our case, an accuracy of 0.86 means that 86% of the data was correctly identified as containing a need or not containing a need by the algorithm. However, accuracy alone is not enough to measure performance, especially if data is skewed.

Therefore, there are two main values to look at. Precision is the percentage of tweets which are real needs based on the manual coding, out of the tweets that were assigned as a need by the algorithm. A precision of 0.71 means that out of the tweets predicted by the algorithm to contain a need, 71% had also been manually coded to contain needs. Recall is the percentage of tweets with a real need based on the manual coding, which were also assigned as such by the algorithm. A recall of 0.74 means that out of our manually coded tweets which contain needs, 74% were also identified as containing a need by the algorithm.

The F-score represents a weighted average that includes both precision and recall. This is calculated by using the formula $F_\beta = (1 + \beta^2) * \frac{precision * recall}{(\beta^2 * precision) + recall}$, where β can be changed depending on whether the focus is on precision or recall. Thus, choosing $\beta < 1$ indicates a focus on precision, $\beta > 1$ indicates a focus on recall, and $\beta = 1$ indicates a harmonic mean between focus on precision and

recall. The closer the F score is to 1, the better our model has functioned. Focusing on the harmonic mean between precision and recall, an F_1-score of 0.73 indicates that an excellent result has been obtained using the Netflix data set, as many of the actual needs were captured by the algorithm.

6. Discussion

6.1 Practical Discussion

The use of the BERT algorithm provided a way to assess the efficiency of our needmining approach. The algorithm has proven itself reliable, and with the biggest categories in the manual coding process being related to adding more shows and correct subtitles, watchability seems to be one of the prime factors that makes users join, stay, or leave Netflix. However, there is a plethora of factors that can influence user experience with the Netflix application, some of which were listed as improvements in the 'small fixes' section. Video quality seems to often have issues, which, in the case of the widespread black screen problem, can take up to one week to resolve globally. The time these technical issues can take to be resolved explains why many users request better overall customer support. However, if Netflix wants to keep on being the industry leader, it must adapt, overcome, and develop its current strategy.

6.1.1 Apple & Nintendo

As was already mentioned, Netflix follows a generic competitive advantage strategy. More precisely, based on Porter's model, Netflix follows a cost leadership strategy, where they are always in search of a competitive advantage, aiming for the lowest operational costs in their domain (Robbins & Barnwell, 2006; Moore, 2019). This also falls in line with their aggressive expansion (Weerasundara, 2021), which means Netflix must not lose traction and continue to expand. A company should aim to reach as many people as it possibly can, and two of its prime opportunities are through Apple and Nintendo.

The Apple TV has around 25 million paid users as of March 2022 (Statista, 2022c). Having streaming services on a media box is essential, however, Netflix used to be one of the few major streaming apps to not be fully integrated within Apple TV, meaning it did not use the Apple TV player to stream. Nonetheless, ever since April 2022, Netflix has begun rolling out new updates for the redesigned tvOS 15 video player (Adorno, 2022). It seems that both Apple and Netflix came to an agreement, as Apple TV users can now watch Netflix much easier than ever before, with all of its updated features. Netflix has managed to overcome this impasse; this is a good decision, as falling behind competitors could've resulted in a number of consequences, such as many potential customers not signing up, subscriber loss, and more room for their competitors to take advantage of.

MacOS currently has around 100 million users and accounts for 15% of operating systems used worldwide (Morales, 2022). This means that one of the largest operating systems does not have a Netflix app, possibly resulting in the loss of potential users. However, it also seems that major competitors such as Hulu and Disney+ do not have one either (Haslam, 2020; Wilson, 2022). This could represent an opportunity for Netflix, as they could be the first to accomplish this feat if they choose to create a MacOS application. This must only be done if there is a need, and with only four tweets out of 2.400 requesting this feature, it does not seem to be a top priority for any streaming company. Thus, Netflix could explore this possibility in the future, but only if there is a larger need for it.

The Nintendo Switch is the latest Nintendo video game console and currently competes with Sony's Playstation 5 and Microsoft's XBOX Series X and S. Having launched in 2017 with a head start of almost three years compared to its competitors, the Switch has sold almost 108 million units, exceeding the sales of Nintendo's previous best-selling TV console, the Wii (Reynolds, 2022). However, five years later, the Switch still does not have a Netflix application, while one has been present on the other major consoles since previous generations. The Netflix application was present until 2019 on older Nintendo consoles such as the Wii U or the Nintendo 3DS (Chaney, 2022), meaning this represents a large opportunity to gain subscribers as long as an agreement can be reached between Netflix and Nintendo. Currently, the only other competitor available on the Switch is Hulu, but this is restricted to the United States (Keeley, 2022). With so few streaming platforms, it may be that Nintendo is not willing to concede the family-friendly aspect of their console, as Netflix and other streaming platforms display content destined towards multiple audiences. Perhaps Nintendo would welcome Netflix back were they to adapt to their demands.

6.1.2 Quality over Quantity

For Netflix to attract more people, quality movies and series must be acquired or produced. A common criticism of Netflix is that 'there is nothing to watch', despite having such a large library available. Unfortunately, it seems that Netflix often mass-produces low quality shows, as they choose quantity over quality, leaving the impression that 'there is nothing to watch'. This is also affected by the fact many shows come and go as streaming rights may have end dates and shows become geographically separated.

As one Twitter user pointed out: "Yeah that still doesn't make sense, why would You seek global rights for Season 4 knowing full well we (the subscribers) have no way of watching 1-3? Why waste money like that when nobody benefits?". Netflix would rather acquire whatever they can get, leaving many people to watch a show on different streaming platforms. This can be a serious problem for shows that have continuous storylines, as splitting them makes streaming on multiple platforms mandatory. Netflix should focus on creating unique shows with a larger chance of becoming widely acclaimed, much like Squid Game, and acquire movies that are known to have done well at the box office or have gotten generally favorable reviews.

6.1.3 Expansion to India & Localization of Content

For users to enjoy these shows, they must be able to sign up in the first place. If Netflix wishes to flourish, continue

its expansion, and reach more people, then it must successfully penetrate the Indian market and develop within it. India is the second largest country on Earth, and with over 560 million people with internet access (Keelery, 2021), this represents a prime opportunity for Netflix if they manage to expand within such a large market. However, Netflix does not offer the possibility to pay with cards such as RuPay, GPay or Amex. Within the last few years, RuPay has become the largest banking card provider in India, from merely having a 17% market share in 2017, to issuing more than 60% of total credit cards in 2021 (Panda, 2021). This represents a huge loss, as Netflix should come to an agreement with RuPay to allow their cards to be used as a payment option.

It also seems that many Indian fans are not happy with Netflix in the first place, especially South Indian users. Many request more and more shows in Hindi, but there seems to be a neglect of South Indian languages; a separate branch of languages unrelated to Hindi, meaning the average native speaker would likely not understand Hindi without any previous knowledge. Netflix CEO Reed Hastings has previously stated that the company was frustrated due to their lack of growth in India (Deep, 2022). Thus, if Netflix wishes to expand, India mustn't be treated as just another branch of Netflix. Hollywood is for the United States what Bollywood is for India, and Netflix needs to focus on India on a much larger scale, bringing in more local productions in order to satisfy current users and attract new customers. However, if they wish to penetrate and be successful within the Indian market, Netflix needs to make their application accessible to as many people as possible and come to an understanding with the largest credit card providers in the country.

6.1.4 Security

Once RuPay cards are implemented within the system, Netflix should also take a look at the system itself, and make sure it is secure. Many users complained about changing credit card details and billing plans without their knowledge, as well as their accounts not being secure enough in general. The latter issue can be solved through the addition of two-factor authentication (2FA), which Netflix does not currently require even when logging into the application or website from a different location. This is one of the most requested features in the data set, as implementing extra steps in order to sign in increases an account's security. This can include, for example, an email sent to the user's address, or an SMS sent to their phone number to confirm that it is truly them who is signing in. Another option would be the possibility of logging in with the user's fingerprints on mobile devices, or on laptops with fingerprint scanners. Thus, these features should be implemented as soon as possible to increase security. The former problem may require banks to take action rather than Netflix, however there is a trade-off between security and customer freedom; the more steps there are to sign in, the more secure an account is, but also the longer it takes. Thus, 2FA would also solve this issue while making payments, as only one additional step increases security while not irritating the paying customer to the degree that they would not sign up anymore.

6.1.5 Quality of Life Updates

Lastly, Netflix mustn't forget to also keep its current customer base happy, which can also be achieved through smaller quality of life fixes; these examples were listed under the 'possible innovatory ideas' chapter. Netflix should also be able to implement these smaller features, as many users would enjoy, for example, being able to pay yearly instead of just monthly, being able to randomize the episodes they watch within a series, changing video quality at will, or knowing when a movie will leave the Netflix catalogue thanks to a "leaving soon" category.

6.1.6 Conclusion

All in all, it seems that Netflix has quite a few opportunities to expand. However, in order to do so, they must make sure that people can sign up for their service in the first place by providing more payment possibilities in the markets they wish to penetrate. These markets also need more quality local content, as Netflix tends to deliver quantity over quality, and may favor some regions over others. Refining their library is important in order to give users the quality they deserve, however, users must also be able to watch the content they pay for on all of the most popular devices. With Netflix updates on Apple TV, but still no news of a Nintendo Switch application, it seems that Netflix is headed in the right direction, but must still push harder to expand on platforms that users often request. As Netflix expands, the firm must make sure that their customers are safely kept away from threats, kept engaged, but must also be kept pleased through regular updates with new smaller features. If these steps are followed, Netflix should be able to keep its top spot through regular updates and the introduction of both larger and smaller features alike.

6.2 Theoretical Implications

It seems that lately, Netflix has had its fair share of unfortunate events; as subscriber count decreases, users complain about quality, prices, controversies, and many more, all while customer support may not always be able to handle every issue on its own at once. However, this study is not only useful from Netflix's point of view, but also from a researcher's point of view. This paper discusses the domain of social media, which is still relatively new, and provides information on how companies can gather useful data through social media, the impact customers and customer needs can have on a company, and how companies can use the most relevant data to grow and expand their platform in different directions. This paper has identified Netflix users' needs and wants and has proposed a number of practical solutions that could improve user experience as well as attract more customers. The use of this needmining method is justified, as a precision of 0.71 and a recall of 0.74 indicate how efficiently the algorithm has captured needs.

This paper also discusses these issues from a societal point of view, and explains how people and users can highly influence a company's success. Thus, a knowledge gap is filled in the domain of social media and customer needs, as the link between the two may not always be clear when some companies may still struggle with effectively using

big data and social media as a tool for innovation. This paper provides research by discussing and analyzing how customer needs can be identified and differentiated based on usefulness, as well as providing paths and alternatives Netflix could be focusing on to keep up with their competition.
However, there are still limitations to this research, which can influence the outcome and results. Thus, future research may be done in the same domain in order to mitigate the limitations.

7. Limitations and Future Research

This paper was written by one person, and the filtering was also done by only one individual. Despite having removed 5.638 of the initial 15.434 tweets in the data set, it is possible for some keywords, URLs, or near-identical tweets to have not been removed from the final data set, as the last filtration step was done by hand while coding, and is prone to human error. The manual coding was also done by one individual, and as mentioned previously, this means that the manual coding process has been completed subjectively. Perhaps future research could use more resources and acquire a much larger sample of tweets to be coded by multiple individuals. However, the same issue does remain – subjectivity, as each individual may consider different tweets as a need depending on their own understanding of the tweet.

The predictions in this paper were done by an algorithm which used half of the manual coding results as training, in order to predict the other half. As technology improves at a faster and faster rate – *see Appendix 1* – so do algorithms. This means that one of the best language processing algorithms available was used, but future research may have a better version of the BERT algorithm to work with, or even an entirely new algorithm that is much more precise and efficient than the current one. For example, the research paper Kühl et al., 2016, was written six years ago, and with more advanced technology – meaning with the use of the BERT algorithm – the pre-processing step was not necessary in this paper. Thus, future papers may also be able to go through certain steps of the methodology much faster.

Great results were obtained when applying the BERT algorithm to our data set. However, Twitter itself may also have some limitations, as many of the tweets will reflect what Twitter users need first. This may differ from the general public's needs, since it has been established within this paper that interactions on social media may affect customer thinking and behavior (Fischer & Reuber, 2011). Twitter is a platform where 61.6% of its users are male, its largest age group is 18–29-year-old people, accounting for 42% of total users (Barnhart, 2022), and just 10% of Twitter users in the US generate around 80% of the tweets on the social media application (Jay, 2022). For instance, on Facebook, 57% of the users are male, the largest demographic is 25–34-year-old people, accounting for 31.5% of total users (Barnhart, 2022), and more than 90% of its activity comes from outside the US and Canada (Aslam, 2022). Each social media platform attracts a different type of audience, which can have an influence on the data collected during research, as a few online users may not always have the same needs and requests as the general populace.

It would also be interesting to see this same type of research done in the future with other applications, especially Netflix competitors, in order to find out the difference and similarities in customer needs and requests. If another paper coded and analyzed customer needs tweeted towards Hulu, Amazon Prime, Disney+, or any other competitor, comparing the most common needs could yield interesting results. It seems that, as technology advances, this type of research could be done more and more efficiently and yield more results that could be compared to those from previous research, to see whether there are any unexpected errors, differences, or changes in customer needs over the years.

8. Conclusion

In conclusion, this paper has shown how to manually code, categorize, and identify relevant customer needs, while using the BERT algorithm has proven that there is a viable method to distinguish data usefulness. This process has thus provided research regarding customer needs and the use of social media and big data in the domain of innovation by providing innovatory ideas Netflix can pursue while strategically penetrating different markets.

Analyzing different literature offered insights on the process needed to answer our research question, as well as define a methodology to use in order to code our data set. Once the methodology was applied, and the algorithm ran, results showed that analyzing Twitter data was a practical way of discovering what customers needed, as the precision, recall, and F-score of the data set indicated great results, and many actual customer needs were captured by the algorithm. Innovatory ideas allowed us to focus on Netflix's possible geographical and technological expansion by providing different paths that they could take to outshine their competitors, whilst also improving their own platform. The many different smaller and larger ideas would allow customers to enjoy a higher quality Netflix with more localized content and many new features to improve the viewing experience from more devices than ever before. However, this research topic can still feel rather limited due to the subjectivity the coding entails, or even the platform chosen for selecting our data set. Nevertheless, a foundation can be built to get Netflix back on course as the top streaming platform in the world, despite the issues they may have faced recently.

9. Acknowledgements

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10. Appendices

10.1 Appendix 1

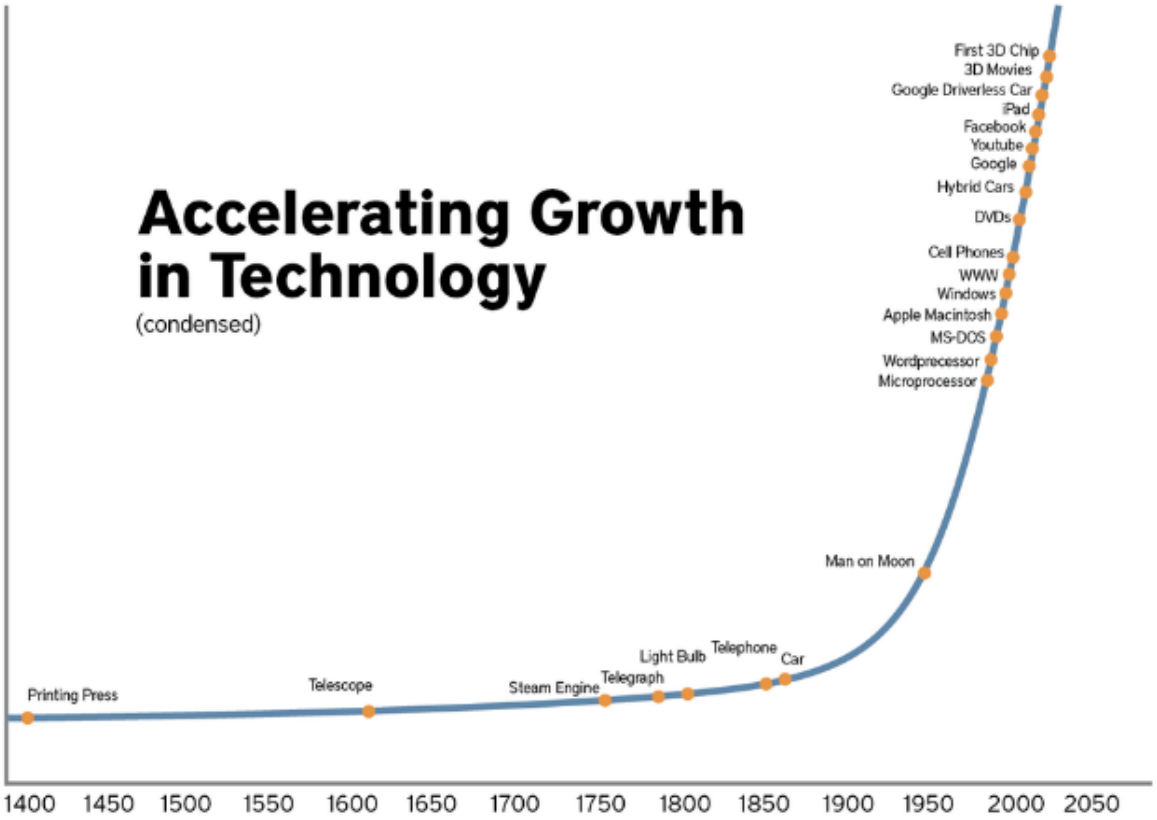

Figure 8. Accelerating growth in technology, Asgard Human Venture Capital for Artificial Intelligence, n.d.

10.2 Appendix 2

Technicalities	Tweets
Audio	*@Netflixhelps the audio on Cheer S2E08 is severely out of sync with the picture. I tried restarting my Apple TV but it didn't help. As far as I can tell it appears to be an issue on your end.* *@Netflixhelps My devices work.I get 5.1 on other titles. On the dropdown list of audio tracks it has 5.1 in every language but for English it just lists original. The Netflix screen lists it as 5.1 so I think they forgot to load the right soundtrack or something. Can someone double check?*
Autoplay	*@Netflixhelps Hey Netflix. Recently my series aren't autoplaying anymore. I cleared cache and cookies for your page, checked if the feature is enabled, relogged and restarted my PC. Is that a problem on your side or is there anything else I could try ? Thanks in advance !* *Dear @Netflixhelps, can we turn off autoplay on the new and hot page? It is annoying and not needed... At least give me an option to slap one of your employees if they do not add the option to turn it off...*
Bug(s)	*@Netflixhelps hi during community the 'play next episode' keeps appearing 5 mins before the end. From the end of season 2 sprung the paint ball episode, and continuing into season 3. If you search on Twitter others have had this issue so it's not my devices.*
Loading	*@Netflixhelps Nothing will load past 24%, the app freezes constantly, eventually when something loads, the quality is so blurry. I've tested my internet and it's completely fine, other apps work great. Netflix has always been under quality on the Roku*
Video	*@Netflixhelps Why can't you add an option for quality Changing in Netflix while playing a video..@Netflixhelps* **Examples from the series of black screen incidents:** *@Netflixhelps Full audio, no video. Happened on 3 different shows (blindspot, swat and the gentlemen)Works fine on the tv's, just issues on 2 devices that I*

	updated both the iOS and app this morning. *@Netflixhelps hello Netflix what is going on with the black screen but audio at the end end of each episode for about two to three minutes, very frustrating and detracts from the experience* *@Netflixhelps we pay so much every month to just watch our shows peacefully ?. Any idea of why in every episode I watch the last 2-3 minutes of the show the screen goes black? Like it's just audio.*
Wrong Order	*@NetflixANZ @Netflixhelps how come when you add TV series to your line up that the seasons don't commence from season 1? Gotham starts with season 2 as an example!*
Audio/Video	*@Netflixhelps Black screen, no audio when opening the app on my tv*
Show-Related	**Tweets**
Censorship	*@Netflixhelps Why did Naruto's maturity rating change to TV- PG? It was always TV-14 before, and that was the perfect rating for it, as it matches up with the mature contents in the show. It doesn't make sense that One piece, and other similar animes are still TV-14.* *@Netflixhelps But why do you censor profanity? If I wanted to watch censored shows, I'd watch cable. I want to hear the cussing! Put a warning on it and let them cuss!*
Content	*You say you're raising prices to add more content, but you're doing that without finding out if that's what people want. I didn't get Netflix so that Netflix could create new content and forcibly add it to what I actually got Netflix for.@Netflixhelps @netflix* *@Netflixhelps Why don't you add popular series to your platform, such as the blacklist, The Walking Dead, and others, the rest of the parts you didn't add until you are a very failed platform and you want success ?!!*
Geographical	*@Netflixhelps - when is the Canadian catalog going to be as wonderful as the US version? The US catalog has some of the best oldies like The Courtship of Eddies Father etc. We pay the same price as the US but we get a much smaller catalog to choose from. #Saveus*
Shows Disappearing	*@Netflixhelps can't find Hannibal(TV show) on Netflix India.*

	Has this masterpiece been removed? :(*@Netflixhelps why did you remove #Homeland from Netflix?*
Show Requests	*#Hannibal Dear @netflix @netflixhelps #HannibalDeservesMore S4 would be ABSOLUTELY AMAZING!! PLEASE this show is fantastic and we need more of it* *Aye @Netflixhelps when can we get the final seasons of @NCIS_CBS ?Ya'll leaving us stranded with 3 seasons to go...* *@Netflixhelps Allow me to ask: Why is the series "The Office" not included in Netflix, even though it is distributed by the company?!*
Subtitles	*@Netflixhelps @netflix i've said this a million times but i'll say it again. You guys had a chance to add Chinese subtitles to your content in accounts even outside Chinese speaking countries during covid but you squandered it. Don't give excuses about licensing, just get it done* *Hey @Netflixhelps, why Indonesian subtitle not available when I downloaded The Silent Sea?* *@Netflixhelps Will English Audio Description be added for the English subtitled Servant of the People? #AudioDescription #Subtitles #Blind #VisuallyImpaired*
Security	**Tweets**
Payment	*@Netflixhelps Is Netflix going to introduce an annual subscription option? I would love to pay up help for the year.* *@Netflixhelps People are having trust issues for allowing that auto-pay feature, so kindly disable that one so that others can avail this service &amp: what is the need for auto payment option? If someone wants he will himself add the next month. @NetflixIndia @netflix*
Security	*@wearenetflix @netflixhelps why can't you update your security features so that only the account holder can upgrade the plan? There should be controls in place! I shouldn't have to ban my children from using a service I pay for because its too easy to do by accident!! #netflix*

Others	Tweets
Feature Request	*Can you guys please have a "leaving soon" category or "watch them before they are gone" section at your interface so that it would be easier to find out which films are leaving from your platform? @netflix, @NetflixIndia, @Netflixhelps, and @WeAreNetflix.*
Support	*@Netflixhelps Are you ever gonna respond to my DMs? I really don't appreciate that you're responding to these people in a matter of minutes while ignoring the DMs I sent you hours ago.*
Others	*@Netflixhelps any plans to integrate with the Apple TV app? You seem to be the only major service that doesn't.* *@Netflixhelps lol how yall gonna let @TwitchSupport beat yall to the switch? I cannot believe yall havent even took a breath towards a switch application, shame, going to be canceling my membership, not coming back till a switch port is made, goodbye!* *@Netflixhelps I'm finally watching Castlevania again. Any chance you could tell me why Styria (Steiermark) is also called Styria in German. Feels a bit weird as an Austrian*

Figure 9. Examples of user needs by sub-category

10.3 Appendix 3

Small Fixes	Tweets
Turning settings on and off	*@netflix @Netflixhelps @hulu @hulu_support @PrimeVideo @amazonfiretv@IMDbTV Time to end ARE YOU STILL WATCHING msgAt very least let users set their own time limits or TURN IT OFFI'm watching @hbomax @peacockTV @YouTubeTV where I'm never asked &amp: can watch as long as I want*
Selecting preferred languages	*@Netflixhelps Something that would really help: The ability to filter out subtitled movies. I have an eye problem and subtitles are really hard. I'd like to be able to select only English language audio but, especially in the horror section, it takes forever to figure it out.*
Randomizing episode order	*@Netflixhelps @netflix Great to see Seinfeld on Netflix. However, a much needed feature is missing! When Seinfeld was on Hulu, there was a shuffle feature to play episodes from all seasons - a great way to watch your favorite show without having to pick a specific episode!*
Transferring profiles	*@Netflixhelps Is there a way to transfer a profile to a new account? This would be nice in case you lived with your parents for a while and want to create a new account when moving out but don't lose your profile ...Also can I somehow change to light mode?*
Subtitle customization	*Netflix really needs subtitle customization settings. Watching dark HDR content with subtitles is painful due to the searing white subtitles. @Netflixhelps*
Yearly payment plan	*@Netflixhelps Do you'll have an option for yearly payment, so that I can use net banking for the same, just like Amazon and Disney+*
Leaving soon category	*Can you guys please have a "leaving soon" category or "watch them before they are gone" section at your interface so that it would be easier to find out which films are leaving from your platform? @netflix, @NetflixIndia, @Netflixhelps, and @WeAreNetflix.*
Netflix Party	*aye @netflix, if y'all are gonna increase your prices AGAIN, can you at least bring back the party feature on @xbox? smfh. @Netflixhelps @XboxSupport*

Large Fixes	Tweets
Integration and expansion to more platforms	*@Netflixhelps any plans to integrate with the Apple TV app? You seem to be the only major service that doesn't.* *Hi @AppleSupport and @Netflixhelps , is there a reason we don't have a Netflix app for MacOS?* *@Netflixhelps lol how yall gonna let @TwitchSupport beat yall to the switch? I cannot believe yall havent even took a breath towards a switch application, shame, going to be canceling my membership, not coming back till a switch port is made, goodbye!*
Refining Netflix's library	*@Netflixhelps Yeah that still doesn't make sense, why would You seek global rights for Season 4 knowing full well we (the subscribers) have no way of watching 1-3? Why waste money like that when nobody benefits?* *You say you're raising prices to add more content, but you're doing that without finding out if that's what people want. I didn't get Netflix so that Netflix could create*

	new content and forcibly add it to what I actually got Netflix for.@Netflixhelps @netflix *Hey @NetflixIndia , consider South people in your mind, while dubbing your content. Languages like Tamil, Telugu not available? South people also paying for subscription @Netflixhelps*
Addition of extra banking card options	*@Netflixhelps In India most of the banks issuing only rupay cards, so better add it in payment option and it helps to attract more people to subscribe.*
Increasing security	*@Netflixhelps Check your @netflix inbox. Theres a message from 10/10/21 where this happened then as well. Data security/customer privacy isn't high on the priority list :(. Last night, CS couldnt even tell me the email addy my acct had been changed to. Dont like to call but guess i have to*

Figure 10. Examples of tweets with possible innovatory features

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