



IS434: Social Analytics and Applications
Project Proposal

Section G1
Group 13

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Who is your client?

Ministry of Funny is a local company which produces original videos that combine humour and technology to tell stories, challenge stereotypes and tackle everyday issues.

They have substantial social media presence on almost all of the common social media platforms, such as Facebook, YouTube, Twitter and Instagram. They have approximately 44,000 likes on Facebook, over 100,000 subscribers on their YouTube channel, 500 followers on Twitter and over 6,000 followers on Instagram.

What is the business problem?

Overall Problem: A lack of in-depth knowledge about their audiences across all platforms, what type of content appeals to them, and what type of content repels them, and it has been more like a hit-or-miss in the type of videos they are doing now.

Specific Pain Points:

- 1) Lack of understanding of the audience demographics to assess effectiveness of recent videos. For example, several videos that target social phenomena in Singapore are applicable to Singaporeans of all age groups, and having viewership in those age groups would help Ministry of Funny to capture a more varied viewership that cuts across generations. This would also help to measure their penetration levels into other segments that are outside of their original target segment.
- 2) Tracking whether different video categories perform better or receive more attention on different social media platforms, specifically Facebook and YouTube. Examples of various video categories that Ministry of Funny has are prank videos, skits about social phenomena in Singapore and parody videos. Additionally, Ministry of Funny would like to track if various actors or guest stars enjoy higher popularity among viewers, which will help to enhance viewership.
- 3) Lack of actionable insights about audience receptiveness towards their videos. There is a wide disparity in the number of views for a lot of their videos, with some videos receiving hundreds of thousands of views, while some only receive several thousand views. Therefore, Ministry of Funny would like to move away from having hit-or-miss videos and have more insights in planning videos that would have higher receptivity from viewers.

**Describe the data you received (or plan to receive) from the client.
OR, describe the data you extracted/crawled (or plan to do so).**

Data to Extract/Crawl:

- Ministry of Funny Facebook Page comments (Facebook Graph API)
- YouTube video description and playlist category (YouTube Data API)
- Comments on individual YouTube videos (YouTube Data API)
- Number of views & likes/dislikes on YouTube videos (YouTube Data API)

Data to Receive:

- Gender distribution (Facebook Insights)
- Age Group demographics (Facebook Insights)
- Facebook post - reactions, comments & shares (Facebook Insights)
- Total video views (Facebook Insights)
- Minutes viewed & Video views (Facebook Insights - Video)
- Overall viewer age group (YouTube Analytics)
- Overall viewer gender (YouTube Analytics)
- Viewer Demographics per Video (YouTube Analytics)

What analysis/analyses do you plan to do? What are the expected outcome (e.g. dashboard, report, charts, etc.)?

YouTube & Facebook Page Comment Sentiment Analysis

- WordCloud on frequently appearing words
- Sentiment Scoring using multi-gram polarity analysis
- Data involved are comments on their YouTube videos and the comments and reactions on Facebook posts

Comparison analyses across videos

- Audience Demographic Analysis by video
- Find information about the top performing videos to identify common points for continuous adoption in subsequent videos. Information inclusive of the following areas:
 - Geographic information
 - Audience retention rates
 - Watch times
 - View durations
 - Video likes/dislikes
 - Video category
 - Video theme
 - Casting details

Comparison analyses across platforms

- Compare the demographic analyses on users who have liked their Facebook page as well as subscribed to their YouTube channel.
- From matching up the corresponding Facebook posts with the YouTube videos, likes or dislikes will be compared to check for consistency with regards to viewership responses. Facebook reactions can be categorised to indicate a like or dislike.

Expected Outcome

A dashboard with:

- An overview of their overall viewer demographics for a recent collection of videos within a designated timeframe
- Popularity of various video categories in relation to its social media platform. Also, a chart that visualises videos that enjoy significantly higher views, due to the presence of particular actors or guest stars
- Results from sentiment analysis that measure the extent of positive and/or negative sentiments that have been derived from the viewers' comments that will aid in their content creation process, in order to ensure more consistency in terms of their viewership numbers.

Bonus analysis if time permits...

- Extract data on followers through Twitter and Instagram
- Social Network Analysis with the following details:
 - Nodes: Ministry of Funny and their alters
 - Links: No. of followers shared between Ministry of Funny and their followers
 - Goal: To find brokers with high centrality scores in order to reach out to others who are not following Ministry of Funny