Brand Building on Social Media: A Case Study of Australis Cosmetics' Facebook Page

What is the problem you want to solve?

Facebook is the most popular social network worldwide with close to 2 billion monthly active users. Moreover, Facebook serves as an advertising platform and its targeted adverts can reach a large amount of users. Monitoring the activity of users on Facebook can help brands identify the trends in user behaviour and use this information as a competitive advantage. Also, communicating with customers via social media provides an amazing opportunity for brands to connect with their customers, gain valuable feedback and build awareness. Therefore, it is important to create content that has a significant impact on users and encourages them to engage with the brand - through liking, commenting and sharing. Prediction of this impact can help brands create messages that have desired effect on user, which can lead to improvement of their social media image.

Who is your client and why do they care about this problem?

The client is an Australian cosmetics company called Australis Cosmetics. Sentiment analysis of existing posts and identification of key performance indicators can be used to predict the performance of the post - the level of user engagement in a form of likes, shares and comments. The company can use these key performance indicators to design the message to post on Facebook in a way that it will have the most significant impact on users. This impact can be estimated before the message is posted on the page, which gives the company an opportunity to alter and optimise the elements of the message to achieve the highest impact.

What data are you going to use for this? How will you acquire this data?

The data set analysed in this project will be acquired using Rfacebook package which provides an interface to the Facebook API and Facebook Graph API Explorer. The data set will consist of a data frame containing a list of all posts posted on Australis Cosmetics Facebook page using the getPage() function. This data frame will include information about posts such as likes count, message, time when the post was created and comments count. For posts created in 2016 and later, the "reactions" argument of the getPage() function will also provide all reactions of the posts (Love, Haha, Wow, Sad and Angry). Comment messages will be acquired using the getPost() function for each post, matched and appended to the data frame.

In brief, outline your approach to solving this problem.

The sentiment of the text of posts by Australis Cosmetics and comments by users will be analysed using tidytext package. Input parameters of the posts - length of the message, time when the post was created and the type of the post will be examined. Based on these input parameters, a machine learning model will be designed and implemented in order to predict the impact of the Facebook post on brand building. The impact of the post will be defined as the total number of comments, shares and reactions received. Appropriate metrics will be used to measure the performance of the model. Visualisations will be created using the ggplot2 package.

What are your deliverables?

Deliverables include code, report and a slide deck.