

# COSC480 Statement of Intent

## Marketing Intelligence Tool

By Jingshu(Ivy) Tang

### Background

As a 10-year-old marketer, my previous job mainly focused on marketing strategy and campaigns. Our goal was to firstly attract as many consumers as our KPIs required and secondly, to maintain the brand relationship with registered members and prolong their loyalty towards brand through both offline and digital consumer campaigns.

Though we have done quite good job based on the numbers we received, I still wonder if we could reach our target by higher efficiency as marketing is a tough job of appealing customers by digging into their thoughts, timely and always up-to-date.

### Project Objective

Therefore, my goal is to set up a marketing intelligence tool which can automatically crawl keywords of the market (in my case, sport market) from popular social platforms (Facebook, Instagram, Twitter and Tik Tok) within the latest 6 months, produce a word cloud of high frequency keywords, give correlation of these words with hot social topics (e.g. heat wave of one region, economic depression etc.) and finally visualize the result in plots so that marketing people are allowed to quickly capture consumer insights and hence, build campaigns accordingly.

Can also scrape over a period of time and analyze one topic over that period

### Core steps to follow

As I possess zero foundation of Python or other computer programming language, it is a little bit hard for me to give precise steps at this moment, since I do not know what I don't know. Nevertheless, I imagine I can:

find an existed dataset

1) Learn how to crawl up-to-date consumer data from the social platforms I target at. I know Python can support to fulfill the crawling function. Therefore, I might need to work on the coding skills at first.

lower the scraping frequency to avoid being banned

2) Data wrangling? I understand the data we crawl can be chaos as language is never random. Hence, I might need to command some wrangling skills so that the collected data is representative and applicable for the next steps.

3) A combination of skills I took from DIGI405 with Python may contribute to the production of keyword cloud. I am studying Antconc now to explore the linguistic technology. I believe if I can merge the two techniques together, my word cloud shall be more informative and practical for business usage, especially at the linkage with social trends.

maybe can apply dictionary function to get the count of keywords

4) As for visualization, I think R and Python can both be a great support to my project. While analysis should be human-dominated, I think I might still want to try some AI in my project, so that the tool can provide a full report of its translation from raw data to human insights. Due to the fact that most of the insights of sport users are similar or with regular mode or logic, I believe AI can surely capture the common behaviors of our consumers. At least a brief report can be referred to.

### Potential challenges

- 1) I am wondering if crawling consumer posts/comments from the social apps is legal. And if it is, will it be prevented by the firewall of those apps? In addition, the quantity of data shall be guaranteed in order to be fairly representative.
- 2) How to make sure the crawling is updated automatically and timely? As for marketing, data exceeding 12 months might cause lagging decision. I need to ensure our strategy implementation is ahead of the market, or even foreseeing the market.
- 3) Will the leverage of AI lead to problems on humanity rights? As consumer information shall be protected, I am worried that a controversial tech as AI might lead to spoil of private information. Is there any measure we can apply to avoid such thing?

### change idea & tips:

- focus on one social platform, one specific topic e.g. opinion on outdoor sport market
- search Facebook feature to see if can download data directly
- sentiment dataset
- higher grade: basic coding from the course (learning module 1-11) + self study contents (complex python coding/library - demonstrate your ability of expand learning), documentation quality
- frame of what the project will be : objective, plausible dataset, functions to be developed and expected results