

Stat424: Project Proposal

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1. Introduction

Instagram in today's society has become the main social channel that has the highest average engagement rate. Users promote their business, restaurant, and even themselves through the use of this social media. In this project, I am going to figure out what makes the Instagram account successful.

Successful Instagram in quantitative meaning, is that the owner of the account has credibility just by one's social account, can persuade others with one's authenticity, and has a brand of one's own. In qualitative meaning, successful account means that the account has more than 30M (thirty million) followers. I will test 9 different Instagram account in this project. The response variable for this project is number of followers that differ by three factors given.

The three factors that I am going to implement is:

- If the user includes biography in his/her profile
- If the user uploads his/her selfie frequently (more than three times a week)
- If the user has more than 5,000 posts in his/her account

Factors	Variable	Low(-)	High(+)
Biography	A	Not Present	Present
Selfie	B	Less than three	Three
Posts	C	Less than 5,000	More than 5,000

2. Statistical Analysis

For this experiment, I am going to use Minitab to analyze the factorial design. I am going to perform ANOVA analysis and F-test in order to compare how followers of users differ. If the F-test concludes that it is not significant, I am going to continue the test with Tukey comparison method.

The image shows the Instagram profile of 'thisisbillgates'. Red circles and arrows highlight specific features corresponding to the project factors:

- Factor A (Biography):** A red circle around the text '166 posts' points to a box labeled 'A'.
- Factor B (Selfie):** A red circle around the profile picture points to a box labeled 'B'.
- Factor C (Posts):** A red circle around the bio text 'Sharing things I'm learning through my foundation work and other interests' points to a box labeled 'C'.

Below the profile picture, there are three small video thumbnails showing Bill Gates speaking, which are also circled in red.