To: Pizza Butt Company CEO

From: Anthony Fauci, Data Scientist

Subject: Study Proposal for Pizza Butt’s Marketing Advertisement

Dear John Doe,

I am pleased to have the opportunity to propose a study design for Pizza Butt to support claims made in a marketing advertisement that highlights one or two of the company’s strengths. In this memorandum, I will outline the research question(s) or claims to be addressed, the variables to be recorded, and the different graphical and numerical summaries that could be used to demonstrate the company’s strengths.

Research Questions:

Our study will focus on comparing Pizza Butt’s performance to that of its main competitor, Pizza Crud, with respect to the speed of service and customer satisfaction. Specifically, we want to answer the following questions:

How long does it take for a customer to receive their order from Pizza Butt as compared to Pizza Crud?

How does the overall customer satisfaction of Pizza Butt compare to that of Pizza Crud?

Variables to be recorded:

To address the research questions, we will collect the following variables:

Time taken to prepare and deliver the pizza order, recorded in minutes.

Customer ratings on a scale of 1-5, where 1 represents very dissatisfied and 5 represents very satisfied.

Data Collection:

We propose to collect data from a random sample of 50 customers who order pizzas from both Pizza Butt and Pizza Crud within a one-week timeframe. To ensure consistency in our data collection process, we will:

Ask customers to order the same type of pizza (e.g., pepperoni, veggie, etc.) from both Pizza Butt and Pizza Crud.

Collect the data anonymously, without asking customers for their personal information.

Data Analysis:

We will use descriptive statistics to summarize the data collected. For the time taken to prepare and deliver the pizza order, we will calculate the mean, standard deviation, and range for both Pizza Butt and Pizza Crud. We will also create a histogram to visualize the distribution of time taken for both companies.

For customer satisfaction, we will calculate the mean, standard deviation, and range for both companies. We will also create a bar chart to compare the overall customer satisfaction of both companies.

Conclusion:

In conclusion, our proposed study design aims to provide reliable and valid evidence to support claims made in a marketing advertisement highlighting the strengths of Pizza Butt. By comparing the speed of service and customer satisfaction of Pizza Butt with that of Pizza Crud, we can demonstrate the company’s strengths and competitive advantage. The data analysis, in the form of numerical summaries and graphs, will help us clearly communicate the results to potential customers.

Thank you for considering our proposal. Please do not hesitate to contact us if you have any questions or concerns.

Sincerely,

Anthony Fauci

(fraud)