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SNHU

DAT 220: Milestone 2

**Introduction: Business Problem What is the overall business problem you are trying to solve?**

The overall business problem I am trying to solve is to find what modifications are needed to prevent loss of revenue from Bubba Gump Shrimp Company and create new routes of services to increase its revenue growth. In order to accomplish this task, I am using a strategy of creating data models by using a small, controlled group of 500 customers’ information from collected data by Bubba Gump Shrimp Company and presenting these models to higher ups of the company.

**Introduction: Analytic Method What is the purpose of the analytic method/approach/strategy you are using? What type of information does it yield?**

The strategy being used is to harvest information from data mining on a group of information from 500 customers. The data will yield information such as purchase history and customer’s responses on their satisfaction with the company. Using the information, I can create histograms, data results, and charts of the results gathered by the 500 customers. These designs will allow me to show the company a visual map on the areas needing modification through improvement and/or creating of new routes to benefit the company through increase growth of revenue.

**What data mining tools will you use to perform the analysis? Why these particular ones?**

The data mining tools I would use to perform the analysis is the JMP Pro data analysis tool. I have already opened the data file using JMP and it showed the information needed. JMP was also able to create graph tables and information using the Bubba Gump data. I also would use this tool system because I have used it for a prior activity in this class and it helped me accomplish the activity.

**What data visualizations will you use in your report, and why?**

Using the Bubba Gump Data set, I will use Histograms, quantiles, CDF Plot and summary statistics. Another graph, I would use a pie chart to show a visualization of the revenue brought into the corporation. For the Histograms, quantiles, and summary statistics, I can show the number of purchases has been used to purchase items whether it is from a third party, location, or online purchases. These breakdowns can allow the employees of Bubba Gump a visualization for the statistics of the purchases. I will also these types of data visualization to create a further detail breakdown for the restaurant purchases and the different states. With this information, I can predict which state is first and last for sales, which can be used to help the corporation in showing the areas needing assistance. If I obtain timeline information of revenue, I will use a CDF plot to show an increase or decrease of revenue over time. For a pie chart, I would use to show the breakdown of the total revenue being brought in by percentage using the Restaurant, Webstore, and third-party data columns.

**What is the specific research question that needs to be addressed? What research question will you work from in order to analyze the given data for meaningful patterns?**

A specific research question that needs to be addressed in order to analyze the data to have meaningful patterns would be “What area of sale bring in the most revenue?” and “What area of sale brings in the less amount of revenue?”.

**How will you determine if your research question was answered or if your hypothesis-generation was successful? How will you measure progress?**

Using the data visualization and the data, I can determine the answer to my research question by showing a breakdown of the total amount of revenue from each area of sale. Prior in this milestone, I described how a pie chart can show this breakdown in percentage to show which area of sale needs assistance. I can measure the present progress by using the pie chart and I can measure progress overtime by comparing each area of sales using a CDF plot, if I am given timeline information for each area.

**What are cogent follow-up questions or explorations that should follow from your initial research?**

A cogent follow-up question or exploration I could ask after my initial question is “What assistance is needed to help the area of sale with the lowest amount of revenue being brought to the company?” and another question I could ask would be “How can the company use its resources to benefit each area of sale?”.

**Are there any published sources or other resources that address your line of inquiry? Where do they fall short? How will they help guide your analysis?**

I searched Google and I was unable to find any published sources to assist me with this data information. I would use the resources given to me by the DAT 220 class from SNHU. I would use my book “Practical Guide to Data Mining for Business and Industry” because it gives information on general issues such as missing data information. The book will help guide me when I receive data and fall into issues by comparing examples from the Practical Guidebook to the data that I am receiving from Bubba Gump.