

Q-STEP INTERNSHIP: BUPA UK

Yun Chao, BA Social Science: Criminology and Quantitative Methods

Bupa UK is an international healthcare group and one of the UK's leading healthcare specialists. It is a private healthcare not-for-profit company limited by guarantee.

Objectives

My objective at Bupa UK was to help and support the Digital Team and Marketing Database Team. Two of the tasks I did were removing customers' data from the database and analysing a small customer survey to explore the possible factors affecting customers' experience with Bupa's online quotation system. I also joined and helped a group of postgraduate students from the University of Manchester with their project.

For the task for Marketing Database Team, I used IBM UNICA, Excel, and SQL to locate and remove customers' data on their requests. For the task I did with the Digital Team, the variables came from the company survey designed to explore why customers choose to leave the website. I mainly used R to recode the variables, run statistical tests and text mining for the verbatim comments.

Methods

The tasks I did for my internship divided mainly into two parts: the first part was removing customers' data from the system with the Marketing Database team, the second part was the analysis of a customers' survey using R.

For the first part, I used IBM UNICA to build flow charts that linked to the customers' database to locate customers' data when they requested to remove their data according to the GDPR. After locating their data with UNICA, I then removed them through SQL.

For the second part, I used R recode the data and produce a simple report to find out what were the customers' experience with the company's website. First, I recoded the variables so it was easier and more logical to analyse. After that, I ran a t-test to see whether the customers' experience with the webpage varies between the type of computers and systems they were using.

After the statistical analysis, I analysed the verbatim comments left by the customers at the end of the survey. To analyse the verbatim comments, I use the following packages: "tm", "SnowballC", "wordcloud" and "RColorBrewer". The functions in "tm" helped me to prepare the verbatim data by remove any spaces, numbers, and common English words such as pronouns and prepositions. After preparing the verbatim data, I then used the functions in "SnowballC" and "wordcloud" to first find out the frequencies of the keywords in the data, then created a word cloud based on their



The new Bupa Place in Salford



A demonstration of the word cloud used for analysing the verbatim comments from the customer survey.

Conclusions and Thoughts

The results of my analysis were company confidential and there were no outcomes for the part I did with the Marketing Base Team. The sentiment analysis was not applicable to analyse the verbatim comments, because the comments left by the customers were too short and simple to extract any meaningful sentiments. During my time at Bupa UK, I learnt how to use new SQL and IBM UNICA. I also experienced cleaning and preparing first-hand data for analysis and text mining using R. I received many help and support during my internship and the time I spent on this internship was very meaningful and inspiring.