**HANZHANG XIONG**

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***Educational Background***

**Northeastern University Jan. 2019-Apr.2021**

Candidate for Master of Science in Data Analytics Engineering

Relevant courses: Operation Research, Data Mining, Database, Data Visualization, Database Design, Simulation Analysis

GPA: 3.9

**Wuhan Polytechnic University (WHPU) Sept. 2013-Jul.2017**

Bachelor of Civil Engineering

***Internship Experiences***

**Country Garden Group Jun. 2018-Dec. 2018**

Title: Project Manager Assistant (Full time)

Duty: Managing the ‘City Glory’ Project and working through the entire project plans and construction plans; Implemented construction plan, construction organization and technical measures. Using Tableau to build the price and population density of the different area to evaluate the investment value in the place which the government will auction.

***Research Projects***

**The insurance policy Dec. 2019**

Title：Research by Python, R (Python, R /Data Mining Course)

Content: Using association rules to find that what is the existing customers who tend to buy the ‘caravan mobile home insurance’ policy. Using the six classification models built on the unbalanced data tend to give a very high accuracy due to classifying almost all non-success class observations correct (which is the majority – 95%).

Achievement: The performance measures (sensitivity, specificity, recall, precision, accuracy and ROC curves) associated with all six models. I recommend two different strategies based on the selected tradeoff between PPV and sensitivity, due to the result of the analysis of the 18 models. Now, I calculated the highest profit for each of my 18 models depending on the optimal cutoff for that mode. This visualization can be observed in the notebook and I see that my model ‘logistic regression’ on the unbalanced dataset turns out to be the most profitable model out of the all 18 models at an optimal cutoff value.

**New York Crime Analysis Dec. 2019**

Title: Research by R, Tableau (R, Tableau /Data Visualizations Course)

Content: We use R to clean the dataset which consisted of around 347,000 rows and 34 variables. The data also records the attempted crimes i.e. whether or not the crime was successful it is featured in the dataset. We use R and Tableau to visualize the data to show the number of different crimes by tree map and the density of the crimes by location map. Our analysis aims to answer questions that helps the community get a clear sense of how safe the city is and what is NYPD’s role in eliminating these crimes.

Achievement: Got an A letter grade in the class and my professor thinks this project’s presentation is clear and is helpful to the community.

**Economic Analysis of Grocery Stores Jun. 2019**

Title: Research by Excel (Excel/Economic Decision Making course)

Content: The project’s ultimate goal is to select an affordable and high-quality Grocery store in the Greater Boston and Quincy area which is accessible and can provide sufficient parking space for the customers. To achieve the goal, we will increase the products diversity based on location and the resident density in that area. We have narrowed down to 3 alternatives and have selected three areas around Boston.

Achievement: After all the evaluations that we have performed like PW analysis, FW analysis, Annual Worth and IRR analysis. We have decided that Alternative 2 is the best one out of all 3.

***Skills & Interests***

Skills: SQL Server, Tableau, R, Python, Lingo, C++, Excel, MATLAB, CAD, PKPM, BIM, MIDAS