Topic:

In this project, I aim to investigate what factors will affect the rating and result in a higher level of price in the next sales time period of electronic products in online shopping.

Who will concern:

Online shopping has been one of the most popular shopping modes, especially for those who are always occupied with work and school stuff. Since consumers are only able to access to the information of products from the websites, but are difficult to check the quality of products by themselves, they are taking a relatively higher risk to receive inferiors. In order to avoid this undesirable circumstance, consumers highly rely on the rating from other users and buyers to make a purchasing decision. In other words, a higher average rating of one product will potentially lead to a higher probability of being purchased. If the producers of the electronics fully realize the factors that positively affect the average rating of their products, they will be able to design responding strategies to enhance the rating, and hence the volume of sales.

On the other hand, the price trends of products will impose an effect on purchasing behaviors. Once consumers notice that the price will go up in the next time period, then it will be better to purchase at the current stage. Hence, investigating the driving forces of the increase of price will guide consumers to make a wiser purchasing strategy in terms of online shopping of electronics.

Data:

I will use one dataset published by Kaggle called *price change prediction of electronics in Online shopping*, which includes the information of different electronic items on Indian online shopping websites for several months from 2011 to 2012.

(The link: https://inclass.kaggle.com/c/price-change-prediction-of-electronics-in-online-shopping/data)

Method:

In this dataset, the brands, color, shipping methods, stock status, rating, websites where sold, category and price information of products are provided. According to the availability of data. I will conduct a multiple regression model for the first question, and a linear (or non-linear) probability model for the second question. Average rating of a product is a continuous variable (from 0 to 5 with integer), I may simply estimate the effects of available variables on the average rating by a multiple regression model. However, whether the price of a product will increase in

the next time period is a dummy variable, and hence l will conduct a binary choice model to investigate the second question.

Expected outcomes:

I want to show the marginal effects of each variables on the average rating and whether increasing the price of a product respectively. By showing the marginal effects, I may conclude the positive or negative effects and the magnitudes of one variable on dependent variables. Based on the analysis from this report, I expect to provide a guidance to both providers and consumers regarding the improvement of rating and purchasing decisions, respectively.