Barry Pan Professor Shuting Wang CIS 3920 Data mining 3 May, 2020

## Description of project

In my project, I decided to use the data of student's math scores. The data included many demographic information such as parent's job,age,sex,school, and more. My question being if higher desire for education and more study time will result in more success in math scores in general. This puts higher desire for education and study time as my independent variable and math scores as my dependent. I first off showed some non-modeled graphs to show that the data was not manipulated in any way. While running my regression models, it seems like the control variables that were significant were mother's job as health care related, your sex as male, and how often you go out with friends. These control variables would indeed relate toward time spent on studying and higher desire for education. Less time going out with friends would mean you're left with more time to study for math tests. While being male may correlate to more motivation to get good grades so they can get a higher level of education and a mother's job as a health care worker may inspire these students to work harder to obtain a higher level of education so they can get a job in the future and find the same success their mothers did. The regression graphs also show that both my linear and logistic models were fairly normal and normally distributed. I would also use a decision tree, it would show the correlation that spending more time to study and having more free time would correlate with finding a higher rate of passing. The mother's job as a healthcare worker also heavily implies that it has a positive influence on the likelihood of passing. In general, I conclude that both time spent studying and higher desire for education does indeed increase finding success with math scores with less time going out with and more free time to increase time spent studying and the sex being male wiht mother's job being helath care related increases motivation to attain higher level of education.