Problem Set 1

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1 Personal Summary

I started at OU in the spring of 2021, mostly unsure what I wanted to do with my career. I have always had an interest in and an aptitude for math but chose to study political science because of my interest in politics and fascination with the systems humans create to organize ourselves. I knew I didn't want to pursue law school (the most common career path for poli sci students at OU) and when I became aware of data analytics during a sophomore-year intro to political analysis course, I was immediately enthralled, but did not know much about the industry or if I would be able to compete for jobs without a STEM degree. A few years later, after taking some economics courses and falling in love with the discipline, I realized that it was possible to combine my interest in social science with my aptitude for math, and eventually decided to pursue graduate training in economics to better prepare myself for a career working with data. This master's program has been an incredible opportunity to expand my economics, coding, and statistical abilities, and this class in particular is exciting for me because the skills I will learn will allow me to work in a professional data science setting which is my goal after graduation.

My primary research interests in economics and data science are in the world of public economics. The empirical study of how, when, and why our government interacts with the economy is right at the center of my academic interests, combining my knowledge of political history and government operations from political science with my knowledge of the economy and my data analysis skills from economics. Previously, I have conducted research on how TIF districts can interact with and deleteriously affect education finance, and I plan to conduct more research on how the elimination of the state portion of our grocery sales tax has impacted our state and local economies. I do not feel attached to any particular research topic in this course, though, because my interests are quite broad. I plan to spend time browsing Kaggle and the UC Irvine Machine Learning Repository to identify data sources and generate project ideas.

1.1 Equation

$$a^2 + b^2 = c^2 \tag{1}$$