The techniques I have learned in this course are immediately applicable in my work in local government. Many of the statistical focused courses I have taken in the program have focused on statistical methods more appropriately geared towards theoretical or experimental statistics where the goals are more mathematical than decision driven. I greatly appreciate that this course has been geared towards answering common business questions. The problems we have focused on come from authentic, real-world questions and have been presented in ways that I can easily see coming down from our department directors or city council, not in the abstract of federal research grant application.

The module on decision modeling was especially useful in my approach to working with managers of different divisions across our department. We are often presented with complex decisions that all too often come down to vague interpretations of data that is tangential to the decision at hard at best, or even worse, “gut instincts”. The methods taught in this course will allow me to apply mathematical rigor to the entire decision-making process by working closely with stakeholders to clearly define parameters and constraints. After gaining consensus on definitions, a clear model can be derived and a truly data driven decision can be made.

I also plan to immediately implement linear programming into my work around resource deployment and optimization of resources. My team and I have started building models looking at how to use techniques to optimize the placement of fire and emergency medical response apparatus around our jurisdiction and, quite similar to the project in module 5, how to optimize our purchasing plan around EMS supplies and storage of those supplies for our EMT and Paramedic teams.

Finally, I have also appreciated the methodology of teaching these methods in both R and Excel. As I have progressed through this program, R has become my default tool for analysis. While it is often the more efficient tool, it can be harder to walk non-R users through the workflow to gain buy-in on new techniques and projects. Especially for the decision modeling tools, being able to clearly demonstrate the steps of the analytical methods in a tool that is nearly universally used will be to my benefit. The best analysis in the world is of little use if it is not understood and embraced by the end users. I have learned this lesson many times over and look forward to demonstrating to my coworkers my newly leveled up Excel skills.