Data Science Reflection: Database Management for Business, Winter 2022

By the end of senior year, I realized that I had a slight handle on R and Python but had not had exposure to SQL. While I could have taken a class so further sharpen either my Python or R skills, I decided I should at least have some exposure to increase my toolbox of languages. This prompted me to take capstone level class called “Database Management for Business”. This class would help teach me a skill for which I have seen there be a demand for when stumbling across online job boards.

As with my first exposure to R or Python, the very first thing I learned in the class was SQL syntax. I learned the three major functions used in most SQL queries as well as what each one selects in a database. SQL was also created to show relationships between different datasets. This made me learn how to join different data tables, which is arguably the most important skill I learned in the class. There were also different relationships between tables which was important for learning how the database was interconnected. Lastly, I also learned how to create database models in MySQL Workbench and forward engineer data to these models.

With all these skills now learned, it was time to apply them to our final project which was to create a database for a food truck company in Lexington, VA. The first thing that had to be done was to create different tables which would constitute the database. These tables constituted important factors for a food truck company such as inventory, customer information, and order information to name a few. Then defining the relationships between each table was important to create the web of information needed for the company. Finally, the tables had to have actual data in them to be usable. After the database was completed, questions were asked which would help the business such as how many of the menu items are vegetarian? Or which food truck has more visitors? Questions like these would help the food truck company determine where resources should be shifted to increase the efficiency of the business. These questions and queries ultimately resulted in a final report which outlined the specific goals of the project. A data dictionary was also provided as was the original file of the database created, in case others would like to modify it in the future.