Final Project – Professional Self Assessment

Nathaniel Carlson

CS-499

Work on my final project throughout this course has demonstrated my strengths in data analysis and experience in reporting, along with my skills in creating, managing and utilizing SQL databases, and accessing and analyzing this data using Qlik Sense to create accurate, useful and user friendly dashboards to help drive business operations. This has specific relevance to my current profession, and these new skills will allow me to provide more value in my current role and be a much stronger candidate for promotion within my department.

One strength demonstrated both within my final project, and in my professional life are my skills in SQL. Within the final project for this course, I created, populated, and managed 10 SQL database tables using correct data formatting to ensure consistency and accuracy to hold source data from multiple business applications. I am also responsible for maintaining other database tables within my professional life, providing daily data imports and checking the database for consistency and accuracy. This requires both an understanding of the organization of the tables themselves, and of the functions and commands in SQL to enable me to access, modify and query the data within as needed.

Another strength demonstrated in this project and outside of it as well is a strong understanding and application of algorithms to calculate key business metrics from the source data. The dashboard I created for the final project in this course provides accurate and filterable KPIs pulling from almost a half dozen different systems, all with their own nuances, formats and intricacies. I have been able to pull this data together and accurately calculate key performance indicators from them that allow operations managers within the contact center to make informed decisions on the performance of their consultants. I have also demonstrated this skill in my current position, with over five years experience providing contact center reporting, ranging from consultant performance reports, bonus payout calculations, SLA reporting for clients, attrition reporting, and more.

In this role, I’ve also been responsible for working with a team to develop and update reports in tandem, for example providing data from one system, while a team mate populates data from another system, and then working together to implement the correct analysis and calculations to provide insight to stakeholders. In this role, I have also been responsible for reporting the results to stakeholders, and being a subject matter expert on the reporting of the results. This includes being able to explain the source data, the way it was analyzed, and what the results actually mean. It also includes spotting trends or inconsistencies in the data being analyzed, and being able to dig deeper to find the causes and their significance.

My time in the Computer Science program at SNHU has also helped me to develop my understanding of computer programming, both the syntax and nuances of several programming languages, and the logical and mathematical approaches required to develop working software solutions. The work I’ve done here has strengthened my understanding of how to create code in a modular and logical way, and this thinking has expanded to my other professional work as well. One example of this is a recent bonus payout calculator I was tasked to create in Excel, and even in this project, I chose to use table and index references rather than hard coded values for every variable, so that these values could be updated easily in one place, rather than in a dozen different formulas if and when needed. It has also expanded my understanding of data structures, particularly in reference to database management and data model creation. The final project for this course in particular has been a great learning experience in this area, and with it, I have created a data model that will be a strong foundation for much of the reporting tasks my team is responsible for. Security in the code I create is also something that I have been exposed to in the degree program, and while I wouldn’t say it is my strength, work in the courses I’ve completed has at least given me a cursory understanding of some of the ways unintended security vulnerabilities can be created and exploited, and how to avoid them. For example, making sure that input from a user in a program of database can’t be run as a command within the program itself, allowing a clever user to gain access that shouldn’t be permitted.

As a whole, the skills that I have learned and demonstrated in my time at SNHU, and in my final project more specifically, have positioned me well to continue in my current field of reporting and data analysis. My increased understanding of programming and database management will allow me to utilize much more powerful tools to provide beneficial and actionable business insights. In my final project, I was able to create and organize database tables to house data that had previously been exported to excel files and stored on a shared drive. By moving this data to a database, the data is more accessible to those that need it, and simultaneously more secure from tampering by those that don’t need access to the data directly. It also ensures that the data is consistent across all applications, and safe from tampering. I then connected these tables to create a data model that allows for consultant level reporting that is robust and comprehensive, and can be utilized in a large variety of ways to provide insight to the business. Finally, by implementing algorithms, I have been able to successfully recreate the metrics currently used by the contact center, and provide additional data points and analysis that previously was not available. These skills will prove an asset to my current employer or any future employer in obtaining useful business insights to improve overall performance.