Sucry Bendeck

Vehicle Database

Start date: 16/06/2025

End date:

Week 1:(16/06-20/06; excluding Thursday for Juneteenth; 20hrs)

On the first day of work, I started by talking to my interim supervisor, Konner Guppy. Who explained to me what was expected from the Vehicle database project—which is to merge all the different xlx docs with a single database that, hopefully, will be able to be automatically updated every time a vehicle work order is completed. After this was established Konner sent me the necessary xlx documents (via email) that need to be merged into the database. Once I received these 5 documents I reviewed them and ask clarifying question such as what are the acronyms for some of the columns after this was clarified I looked into what software would be the best to mange all the changes and merges that needed to be made, after much investigation and consideration I decided to use a combination of languages to achieve the desired outcome. I used Python and SQL, which are common languages for database management and use them via VS code which is a programming platform for ease of coding.

The first week I merged tables 1,3, and 5 because they were the simplest to merge as they all had in common a single column, VIN. However, because the rest of the columns were not the same names as they all represented different data points I had to rename and clean all the empty space that were found in the column name. Then and only then was I able to merge the three tables into a table called “vins”.

Week 2:(23/06-27/06; 32hrs)

This week I started by reviewing what I did the previous week to remember where I left off and then started looking at the other two tables that had not been touched. After reviewing them I saw that it didn’t matter which I started with as it was going to be just as hard to merge them to the vins table. I chose to start working with table 2; the first thing that I did to this table is to clean the table by removing all the columns that had labels but had no data and hence reducing it to a smaller table of three columns and then it had a lot of null rows so I also reduced it to the seventeen rows that had data. After doing this I tried merging by “Vehicle #” and ran into a data type issue which at first was hard to detect because the error did not say anything about data type so after figuring this out the solution was straightforward, which is to change the data type to object/ text instead of float64. In the end, I was able to merge all the tables into one. This table of course needed some cleaning up. In order to clean it up I saw all the duplicate columns and merged them so that if there was a missing value in either column it would be filled out with the value in the column that did have it. Now, if the columns were the same, we kept them the same if the columns differed, I looked at the date it was imputed and then I used the most recent input.

Week 3:(30/06-03/07; 25hrs)

This week the focus was to make a web app that serves as a survey that would allow the technician to add an updated vehicle database. I initially did the rough draft using vs code and then deploying the page via Stream lit, an application deployment page. For this I used python for the bulk of it and then additionally I used mark down for the titles and the overall look of the page. I showed the application to some staff members that work and have worked on vehicles, and they suggested that I added some fields like: if the tires were changed and if so when. After many iterations and adjustments, I was able to make a survey that satisfied the technician’s need and allowed the database manager to see the data. Doing this allows there to be a way to record all this data that will be useful to keep the vehicle well maintained.