### UTDiscovery Weekly Report & Time Log

| **Weekly Report Number** | 10 |
| --- | --- |
| **Reporting Period** | 11/4/23 to 11/10/23 |
| **Group Number** | 2 |
| **Project Name** | xEstimate API and ALgorithm improved |
| **Mentor/Faculty Advisor** | Dr. Noirrit Chandra |
| **Project Team Members** | Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman |

**Weekly Report**

1. Tasks Outlined in Previous Weekly Progress Report

* We plan to improve our machine learning model by using ordinal categorical variables analysis to see the price change and improve the model accuracy. We have to research to find ways to solve ordinal categorical variables
* We plan to use imputation methods in our dataset to fill up missing values and clean the dataset for training machine learning models

1. Progress Made in Reporting Week (Limit your write-up to no more than two page)

* We made new variables such as age and number of cylinders by manipulating the given data. We categorized the vehicles based on the year they were made into vintage, antique, classic, and modern.
* We started comparing models using the pycaret library

1. Difficulties Encountered in Reporting Week (Limit your write-up to no more than one page)

* We had issues with getting the imputation method to work as they do not work well to fill in the string values

1. Tasks to Be Completed in Next Week (Outline the tasks to be completed in the following week)

* Ordinal Features on data set
* Model comparison with Pycaret
* Using best subset of features
* Model Tuning with PyCaret

**Time Log**

1. Teams Meeting.

* Description(optional)
  1. We divided up the work for the week so that we each did one part of the project and then met up the next day to see how much progress we made.
* Students: Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman
* Dates:11/7/2023, 11/8/2023, 11/9/2023
* Hours: 3
* Other: N/A

1. Client Meeting.

* Description(optional)
  1. We showed them our current working code and discussed what they suggested us to change or improve on.
* Students: Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman
* Dates: 11/7/2023
* Hours: 1
* Other: N/A
* Who didn’t attend the meeting with client: N/A

1. Faculty Advisor Meeting.

* Description(optional). If no meeting, please describe any interactions by email.
* Students: Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman
* Dates: 11/7/2023
* Hours: 1
* Other: N/A
* Who didn’t attend the meeting with FA: N/A

1. Solution Development.

* Description(optional)
* Students: Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman
* Dates: 11/4/23 to 11/10/23
* Hours: 12
* Any progress?
  1. Yes
* Other: N/A

1. Documentation.

* Description(optional) Includes code written by team members for tasks.
* Students: Marcos Munoz, Mehedi Toufiqe, Yaseen Mohammed, Sayema Rahman
* Dates: 11/4/23 to 11/10/23
* Hours: 12
* Other: N/A

1. Preparation Slides., if applicable.

* Description(optional)
* Students: N/A
* Dates: N/A
* Hours: N/A
* Other: N/A