**Machine Learning – Assignment**

You are hired as ML Business Analyst, and you Work with key stakeholders within all business functions to align technology solutions with business strategies to implement ML products, so your task is to prepare analyses and presentations to aid in decisions on product implementations. You also need to demonstrate an informed knowledge of business functions to resolve problems and capitalize on improvement opportunities to supports business processes

Follow the description below carefully to understand and complete the assignment successfully.

* Choose any dataset from the given below public dataset links and proceed further.

<https://www150.statcan.gc.ca/n1/en/type/data?MM=1>

<https://catalog.data.gov/dataset>

* The data will be raw, so as a first step, apply pre-processing techniques to clean the data and make it structured as per your requirement and analysis.
* Apply any of the dimensionality reduction techniques to reduce and remove the insignificant columns in the dataset. What are the two or three most significant columns?
* Apply any suitable Classification and Regression technique of your choice to the dataset and predict the target variable. Explain which algorithm you chose and why.
* Apply another three algorithms apart from what you chose and compare the performance of all the models built.
* Analyse which model is giving maximum performance and why
* Explore the dataset further, frame questions that help you make decisions from the data and answer them by inferring from the dataset.

For example, if you consider the titanic dataset, you can pose questions like which gender’s survival rate is more? Or does being in the upper class have any impact in the survival of the person etc.

* Finally, draw conclusions and create visualizations in Power Bi to communicate your results in the previous step.

**Deliverable:**

1. Power point presentation
2. .py or. ipynb code
3. Recorded video (5-7 minutes) and present your assignment in ppt and explain all questions asked above. (Recorded video should uploaded in BB)
4. Your pbix file

Due :Week 8 (after study week)

**Rubrics -Presentation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Low | Medium | Good | Excellent |
| Effective use of time | No presentation (0 mark) | Does not finish on time or finishes before allotted time. Important information left out.  (0.5 mark) | Finishes on time without rushing or cutting information.  (1 mark) | Time allocated effectively. Finishes on time.  (2 marks) |
| Contents | Missing all the requirements  (0 mark) | Missing 2 or more of the requirements  (10 marks) | Missing one of the requirements  (12 marks) | Demonstrate all the requirements  (14 marks) |
| Presentation skills | No presentation  (0 mark) | Too quiet to be heard. Too fast or too slow. Difficult to understand words. (0.5 mark) | Neither too fast nor too slow; easy to understand. Audience can understand without effort.  (1 mark) | Clear and engaging, neither too fast nor too slow, easy to understand  (2 marks) |
| Use visualization | No presentation  (0 mark) | Does not add value / is not integrated well  (1 mark) | Reason for use is clear and its contribution is worth time to introduce it.  (1.5 marks) | Adds significant value and is used seamlessly.  (2 marks) |