**CAR WORTHINESS PREDICTION**

**Source of dataset:**

Dataset is obtained from the [UCI Machine Learning Repository](http://archive.ics.uci.edu/ml/index.php)

**Project Idea:**

The system will be trained to appropriately predict if a car is worthy to be acquired based on four classifications; Unacceptable, acceptable, good, very good.

Multiclass neural network model will be used to train the data. Through the multiclass neural network, the aim is to achieve a high accuracy rate through adjustments in the learning rate and number of hidden layers.

A neural network model will be used for training.

This dataset has eight attributes and one class attribute. Attributes can be as follows:

* Unacceptable
* Acceptable
* Good
* Very Good

Through a multiclass neural network, we would like to achieve a high accuracy rate through adjustments in the learning rate and number of hidden layers.

**Software Needed:**

R and/or Python will be used for the implementation of:

* Multiclass Neural Network
* Training and scoring the model

**Relevant Papers:**

1. Multi-class pattern classification using neural networks by:

Lee Feldkamp, Yi Lu Murphey, Guobin Ou

1. Learning Multi-Class Neural-Network Models from Electroencephalogram by:

Vitaly Schetinin, Joachim Schult, Burkhart Scheidt, and Valery Kuriakin

1. A Comparison of Methods for Multi-class Support Vector Machines

Chih-Wei Hsu and Chih-Jen Lin

<https://www.csie.ntu.edu.tw/~cjlin/papers/multisvm.pdf>

**Group 4 Team Members:**

WISLET MICHEL- 986073

HAGOS HAILE - 983943

CARLTON ELLIS - 986066

DAVID OTIEGO - 986031

**To be completed by last Tuesday of block:**

Neural network

Model training

Model scoring

Model evaluation