ML Assignment

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1 Motivation

Cloud gaming, sometimes call gaming on demand is a type of gaming that runs the video games on remote servers and stream them directly to a user's device. If the future of video games is streaming, low bandwidth is a party poo per. But AI and Deep learning can present much needed solution for a seamless and lagfree cloud gaming experience.

2 Data

In Regression data set we select mean, standard deviation, variance and all important feature. We just just skip drop frame mean, standard deviation and variance.

3 Exploratory data analysis

Data exploration refers to the initial step in data analysis in which analysts use data visualization. As we know humans process visual data better than numerical data. therefore exploration of data help us a lot to feature selection and model design.

4 Task

In this Assignment we did Linear, Multiple linear regression and Classification task or logistic regression.

4.1 Regression

Linear regression analysis is used to predict the value of a variable based on the value of another variable. The variable you want to predict called dependent variable and the variable which is using to predict the other variable called independent variable. In linear regression we have two variable but in multiply regression we have more than two variable. Lasso Regression is type of linear regression that uses shrinkage. Shrinkage is where data values are shrunk towards a Central point, like the mean. The lasso procedure encourage simple, sparse models.

4.2 Classification

In classification regression the output variable must be a discrete value. We use L1 regularization in this assignment. L1 regularization forces the weights of uninformative features to be zero by subtracting a small amount from the weight at each iteration and thus making the weight zero, eventually.

5 Results

The result are following

Table 1. caption

Model	Acc.	Recall	Precision	F1-score
Model 1	0.5	0.01	0.5	0.5
Model 2	0.5	0.01	0.5	0.5
Model 3	0.5	0.01	0.5	0.5

6 Data Imbalance

Imbalanced data refers to those types of data sets where the target class has an uneven distribution of observations, i.e one class label has a very high number of observations and the other has a very low number of observations. A classification data set with skewed class proportions is called imbalanced. Classes that make up a large proportion of the data set are called majority classes. Those that make up a smaller proportion are minority classes.

7 Conclusion

The conclusion for the this assignment Machine learning is more power full tool in gaming field. We can use any type like regression or classification to improve our games.