**Machine Learning**

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Semester: VII Semester

Designation: Professor

Course: Data Warehousing and Data Mining

Department: IT

Topic: Classification

Conventional Methods: Chalk & Talk
Teaching Methodology: Peer Learning

Classifications and Regression are two types of supervised learning techniques. Most of the problems in real world are classification problems. So, there is a need to teach classification technique using innovative teaching method. A peer learning approach used to explain the concept of classification. Students are formed as groups and discussed about various examples of classification problems.

**References:**

1. https://www.javatpoint.com/classification-algorithm-in-machine-learning

2. https://www.simplilearn.com/tutorials/machine-learning-tutorial/classification-in-machine-learning

3. https://www.edureka.co/blog/classification-in-machine-learning/

**Classification:**

Classification is defined as the process of recognition, understanding, and grouping of objects and ideas into preset categories a.k.a “sub-populations.” With the help of these pre-categorized training datasets, classification in machine learning programs leverage a wide range of algorithms to classify future datasets into respective and relevant categories. In short,

classification is a form of “pattern recognition,”. Here, classification algorithms applied to the training data find the same pattern (similar number sequences, words or sentiments, and the like) in future data sets.

Based on training data, the Classification algorithm is a Supervised Learning technique used to categorize new observations. In classification, a program uses the dataset or observations provided to learn how to categorize new observations into various classes or groups. For instance, 0 or 1, red or blue, yes or no, spam or not spam, etc. Targets, labels, or categories can all be used to describe classes. The Classification algorithm uses labeled input data because it is a supervised learning technique and comprises input and output information. A discrete output function (y) is transferred to an input variable in the classification process (x).

**Classification Algorithms:**

- Logistic Regression
- Support Vector Machines
- Naive Bayes
- Decision Trees
- KNN
- Random Forest