**DAILY ASSESSMENT FORMAT**

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| **Date:** | **18-06-2020** | **Name:** | **Bhavith** |
| **Course:** | **Statistical Learning** | **USN:** | **4AL17EC009** |
| **Topic:** | **Analysis of data,learning probability** | **Semester & Section:** | **6th,A** |
| **Github Repository:** | **Bhavith-Online-Courses** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session**  **Screenshot (152)** |
| **Report – Report can be typed or hand written for up to two pages.**   * **The goals of learning are understanding and prediction.** * **Learning falls into many categories, including [supervised learning](https://en.wikipedia.org/wiki/Supervised_learning" \o "Supervised learning), [unsupervised learning](https://en.wikipedia.org/wiki/Unsupervised_learning" \o "Unsupervised learning), [online learning](https://en.wikipedia.org/wiki/Online_machine_learning" \o "Online machine learning), and [reinforcement learning](https://en.wikipedia.org/wiki/Reinforcement_learning" \o "Reinforcement learning).** * **From the perspective of statistical learning theory, supervised learning is best understood.** * **Supervised learning involves learning from a [training set](https://en.wikipedia.org/wiki/Training_set" \o "Training set) of data.** * **Every point in the training is an input-output pair, where the input maps to an output.** * **The learning problem consists of inferring the function that maps between the input and the output, such that the learned function can be used to predict the output from future input.** * **Depending on the type of output, supervised learning problems are either problems of [regression](https://en.wikipedia.org/wiki/Regression_analysis" \o "Regression analysis) or problems of [classification](https://en.wikipedia.org/wiki/Statistical_classification" \o "Statistical classification).** * **If the output takes a continuous range of values, it is a regression problem. Using [Ohm's Law](https://en.wikipedia.org/wiki/Ohm's_Law" \o "Ohm's Law) as an example, a regression could be performed with voltage as input and current as an output.** * **The regression would find the functional relationship between voltage and current to be {\displaystyle R}IMG_256, such that Classification problems are those for which the output will be an element from a discrete set of labels.** * **Classification is very common for machine learning applications.** * **In [facial recognition](https://en.wikipedia.org/wiki/Facial_recognition_system" \o "Facial recognition system), for instance, a picture of a person's face would be the input, and the output label would be that person's name.** * **The input would be represented by a large multidimensional vector whose elements represent pixels in the picture.** * **After learning a function based on the training set data, that function is validated on a test set of data, data that did not appear in the training set.** |