# NEURAL NETWORK AND DEEP LEARNING

Lesson4: ICP4

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1.**Data Manipulation**

Imported numpy and pandas library , Reading data.csv file and printing the data in data.csv file A screenshot of a computer program

Description automatically generated

Showing the basic statistical description about the data and checking if the data has any null valuesA screenshot of a computer

Description automatically generated

Checking null values, replacing all the null values with the mean and printing 20 rows

A screenshot of a computer

Description automatically generated

Selected two columns Calories and Pulse and aggregated the data using: min, max, count, mean .Filtered the dataframe to select the rows with calories values between 500 and 1000

A screenshot of a computer

Description automatically generated

Filtered the data frame to select the rows with calories values > 500 and pulse < 100 and Created a new “df\_modified” data frame that contains all the columns from df except for “Maxpulse”.

A screenshot of a computer

Description automatically generated

Deleted the “Maxpulse” column from the main df data frame j. Converted the datatype of Calories column to int datatype

A screenshot of a computer

Description automatically generated

Used pandas library to create a scatter plot for the two columns (Duration and Calories).A screen shot of a graph

Description automatically generated

**2. Linear Regression**

Imported the Salary\_Data.csv file and printed the data in Salary\_Data.csv

A screenshot of a computer

Description automatically generated

Splited the data in train\_test partitions, such that 1/3 of the data is reserved as test subset.Trained and predice dt the model and Calculated the mean\_squared error

A screenshot of a computer program

Description automatically generated

Visualized both train and test data using scatter plot.A screen shot of a graph

Description automatically generatedA screen shot of a graph

Description automatically generated