

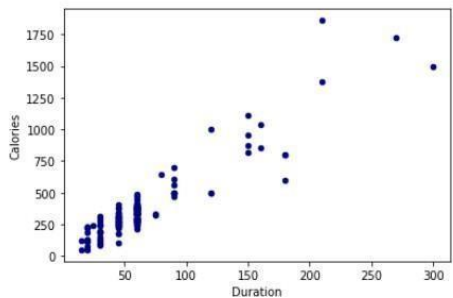
Spring 2025: CS5720 – NN &DL

In-Class Programming Assignment-3

1. Data Manipulation

- a. Read the provided CSV file 'data.csv'.
- b. <https://drive.google.com/drive/folders/1h8C3mLsso-R-sIOLsvoYwPLzy2fJ4IOF?usp=sharing>
- c. Show the basic statistical description about the data.
- d. Check if the data has null values.
 - i. Replace the null values with the mean
- e. Select at least two columns and aggregate the data using: min, max, count, mean.
- f. Filter the dataframe to select the rows with calories values between 500 and 1000.
- g. Filter the dataframe to select the rows with calories values > 500 and pulse < 100.
- h. Create a new "df_modified" dataframe that contains all the columns from df except for "Maxpulse".
- i. Delete the "Maxpulse" column from the main df dataframe
- j. Convert the datatype of Calories column to int datatype.
- k. Using pandas create a scatter plot for the two columns (Duration and Calories).

Example



2. Linear Regression

- a) Import the given "Salary_Data.csv"
- b) Split the data in train_test partitions, such that 1/3 of the data is reserved as test subset.
- c) Train and predict the model.
- d) Calculate the mean_squared error
- e) Visualize both train and test data using scatter plot.

