



AL2002 – Artificial Intelligence Lab

Lab Task # 06

Note:

- Plagiarism will not be **tolerated!!**
- Use comments wherever applicable.

Problem: 1

Develop the K-Nearest Neighbors (KNN) algorithm from scratch using Python, without relying on any libraries on Cancer detection dataset.

Problem: 2

Utilizing the fruit_data_with_colors.csv dataset, perform the following steps:

- a. Read and load the data into the program.
- b. Prepare the data by eliminating any features that contain text or categorical values.
- c. Address missing values by replacing them with the mean value of each column, if necessary.
- d. Divide the data into training and testing sets, with the 70% data being used for training and the remaining 30% being used for testing.
- e. Apply the KNN model for different values of K (ranging from 1 to 10) and examine the results.
- f. Plot the accuracy score for each value of K, to visualize the differences.