**Exercises – Topic10 – Model Performance Evaluation**

1. Refer to the models you have built so far, in Chapters 3, 4, 5, and evaluate their performance using the tools in Chapter 10.

2. Use the poker hand dataset https://archive.ics.uci.edu/ml/datasets/Poker+Hand that is designed to predict what poker hand (five cards) is available in each sample. Each sample contains 11 numbers. The 10 first numbers describe the five cards in the hand – 5 pairs of (suit of card, rank of card), see note below, and dataset description in repository. The last number is the class "poker hand". Build a model to predict whether each sample of five cards (the first 10 numbers) is a winning hand (defined as poker hand 5-9) or a losing hand (defined as poker hand 0-4), and evaluate its performance. What model suits this dataset best from what you have learned so far?

   (Note: Each sample contains 11 numbers: 5 cards in pairs (suit of card, rank of card), followed by the class "poker hand", where:
   suit of card: is Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}
   rank of card: is Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)
   poker hand: is Ordinal (0-9) – see details in dataset description.

   Testing and training sets are available. The last file – poker-hand.names – contains the probability of hand and representation in the datasets.)