ML_portfolio_level10

Edit rubric
Delete rubric

ML_portfolio_level10

Criteria	Ratings						Pts
Part 1: Data Analysis	**5 Pts** **Outstanding** -Interesting and very well motivated data set is chosen - Comprehensive data analysis and exploration is included - Good analysis and insights from data -All experiments for feature correlations are conducted & interesting conclusions are drawn	**4 Pts** **Very Good** -Very good choice of data - Very good data analysis and exploration is included - Some analysis and insights from data - Most experiments for feature correlations are conducted & some interesting conclusions are drawn	**3 Pts** **Good** A simple but interesting data set is chosen. - Good data analysis and exploration is included - Some experiments for feature correlations are conducted	**2 Pts** **Fair** A simple data set is chosen. - Some data analysis and exploration is included - Limited experiments for feature correlations are conducted and no clear insights are provided	**1 Pts** **Poor** A data set was chosen . Limited data analysis is provided . No experiments related to feature correlations	**0 Pts** **No marks** No submission or interview	5 pts
Part 2: Clustering	**5 Pts** **Outstanding** Comprehensive experiments are presented and evaluated for Kmeans. Further clustering algorithms are explored. Experiments using varying the number of clusters are presented. The problem of optimal number of clusters is well researched. Student shows deep analysis and understanding of the problem	**4 Pts** **Very Good** Complete experiments are presented and evaluated for Kmeans. Some other clustering algorithms are explored. Experiments using varying the number of clusters are presented. Student shows good understanding of the problem	**3 Pts** **Good** Experiments are presented and evaluated for Kmeans. Experiments using varying the number of clusters are presented. Student shows good understanding of the problem	**2 Pts** **Fair** Some experiments are presented and evaluated for Kmeans. More analysis could have been included. Student shows adequate understanding of the problem	**1 Pts** **Poor** Some experiments are presented but are lacking evaluation. No analysis or discussion. Student needs to clarify some concepts	**0 Pts** **No marks** No submission or interview	5 pts
Part 3: Decision Trees	**5 Pts** **Outstanding** Comprehensive experiments are presented and evaluated using decision trees. Investigations of the effect of different DT parameters are included. All experiments regarding varying the size of the training-testing data set are conducted and well analyzed. Student shows deep analysis and understanding of the problem of overfitting and generalization.	**4 Pts** **Very Good** Complete experiments are presented and evaluated using decision trees. Some investigations of the effect of different DT parameters are included. Most experiments regarding varying the size of the training-testing data set are conducted and well analyzed. Student shows good understanding of the problem of overfitting and generalization.	**3 Pts** **Good** Experiments are presented and evaluated using decision trees. Some experiments regarding varying the size of the training-testing data set are conducted and analyzed. Student shows understanding of the problem of overfitting and generalization.	**2 Pts** **Fair** Some experiments are presented and evaluated using decision trees. More experiments could have been included to investigate the DT parameters and/or the size of the training-testing data set. Student shows some understanding of the problem of overfitting and generalization	**1 Pts** **Poor** Some experiments are presented but are lacking evaluation. No analysis or discussion. Student needs to clarify some concepts related to DT, generalization and overfitting.	**0 Pts** **No marks** No submission or interview	5 pts
Part 4: Neural Networks (&CNN)	**5 Pts** **Outstanding** Comprehensive experiments are presented and evaluated using Linear classifier, MLP and CNN. Investigations of the effect of the different model parameters are included. Excellent analysis and insights are provided from the experiments. Student shows deep understanding of the relation between data complexity & model complexity and generalization.	**4 Pts** **Very Good** Complete experiments are presented and evaluated using Linear classifier and MLP . Investigations of the effect of the different model parameters are included. Valuable analysis and insights are provided from the experiments. Student shows good understanding of the relation between data complexity & model complexity and generalization.	**3 Pts** **Good** Experiments are presented and evaluated using Linear classifier and MLP . Some investigations of the effect of the different model parameters are included. Some insights are provided from the experiments. Student shows understanding of the relation between data complexity & model complexity and generalization.	**2 Pts** **Fair** Some experiments are presented and evaluated using Linear classifier or MLP . Limited analysis or investigations of the effect of the learning model parameters. Student shows some understanding of the relation between data complexity & model complexity and generalization.	**1 Pts** **Poor** Some experiments are presented but are lacking evaluation. No analysis or discussion. Student needs to clarify some concepts related to the relation between data complexity, model complexity and generalization.	**0 Pts** **No marks** No submission or interview	5 pts
							Total points: 20