**Report**

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Question\_1\_(C) : **Compare the error results and try to determine for what “function depths” overfitting might be a problem. Which ”function depth” would you consider the best prediction function and why? For which values of k and d do you get minimum error?**

Answer : The minimum error that I am getting is k = 1 and d=6 (depth) , Error : 0.49619527464385926 .Thus the minimum error gets overfitting in this dataset . From k = 1 and depth 6 we are getting the minimum error .

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Question\_1\_(D) : **Repeat the experiment and evaluation of part b) and c) using only the first 20 elements of the training data set part b) and the Test set of part c). What differences do you see and why might they occur?**

Answer : If we compare the error of question A and B because A has 128 dataset as well as B has trained with 20 dataset . So Error we are getting in 20 dataset is more compared to 120 dataset . In 20 dataset the randomness is higher compared to 128 .

Graphical user interface, text, application

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Question 2 :

Question\_2\_(C) : **How does the performance compare to the one for the results from Question 1 (C).**

Answer : This function performs better because it takes weightaed value of point other from from 1\_c .

**Text

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Question\_2\_(D) : **How does the performance compare to the one for the results from Question 1 d) ? Why might this be the case?**

Answer : If we compare the error of question A and B because A has 128 dataset as well as B has trained with 20 dataset . So Error we are getting in 20 dataset is more compared to 120 dataset . In 20 dataset the randomness is higher compared to 128.

Graphical user interface, text

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Question 3 :

Question\_3\_(C) : **Discuss what differences exist and why one method might out perform the others for this problem.**

Answer : Logestic regression performs better because it cames more values, thus the model get trained for more wider range and make it accurate .

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Question\_3\_(D) : **Again, discuss what differences exist and why one method might outpe-rform the others in this case.**

Answer : Yes, removing age makes it better because age parameter adds randomess into ago because can’t be factor to determine the gender

Chart, scatter chart

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