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**Output for the assignment:**

A screenshot of a computer

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1. Explain your method that lead to better accuracy?

* To enhance the accuracy of my solution, I employed the MLPClassifier in tackling the problem at hand. Through various trials, MLPClassifier consistently outperformed other methods. Fine-tuning the hyperparameters proved crucial in achieving better accuracy, where adjustments such as setting activation to "identity," choosing solver='lbfgs', alpha=1e-7, and configuring hidden\_layer\_sizes=(100,) contributed significantly. The choice of 'lbfgs' as the solver was particularly beneficial for smaller datasets, and the inclusion of hidden layers in the neural network architecture played a pivotal role in boosting overall performance. Further refinement was achieved by tweaking the alpha values, ultimately fine-tuning the neural network for optimal results. For a visual representation, I have attached a screenshot of the MLP classifier within the program.

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1. what ideas or observations helped you achieve better accuracy on the dataset?

* Eliminating specific columns from the dataset proved to be instrumental in enhancing accuracy. Initially, when all columns were retained, the accuracy was notably low. Subsequently, a closer examination revealed interdependencies among columns, prompting a strategic decision to retain only dependent columns. This selective approach significantly improved the overall results. Following the column removal, I applied standard scaling to standardize the dataset, a step that likely contributed to further accuracy gains.

A screen shot of a computer code

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