# ASSIGNMENT-3

**Q1- Part B, Decision Trees**

1. **Decision Tree:**

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**I am getting very poor accuracies for this data.**

1. **Decision tree grid search**

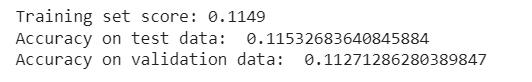
* **The best parameters:**

**max\_depth=10**

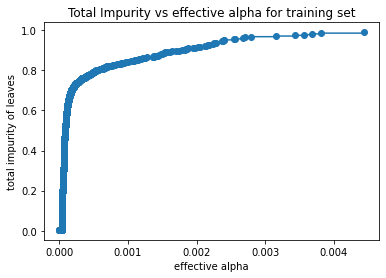
**min\_samples\_leaf=3**

**min\_samples\_split= 3**

* **The train and test accuracy:**

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1. **Decision tree post pruning**

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1. **Random forest:**

**The random forest classifier with n\_estimator: 100 gives better results and accuracy:**

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**Random forest grid search:**

1. **Gradient boosted trees:**