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| --- | --- | --- | --- |
| Model | Strengths | Weaknesses | use |
| Decision Trees | It Does not have too much hyperparameters to consider and is good for complex non-linear problems. | It takes to much time to train and overfits easily. | Recommendation Systems |
| Ensemble Methods | It is good solving both linear and non-linear problems, helps in bias-variance tradeoff, and gives a better accuracy. | It is hard to learn and understand this sort of models. It is also hard to explain and requires more time and space. | Recommendation Systems |
| SVM | It helps in high dimension problems and it is memory efficient | It is not good for data containing noise | Handwriting recognition |

AdaBoost:

The model I choose is called AdaBoost Classifier. It works by putting penalty on wrong predictions and combining multiple models together to get a better result. It is more like teaching a kid, we teach him and every time he makes a mistake we punish him until he makes no mistakes or reach an acceptable level. On every stage of learning the kid we call him a weak learner (the models that need to be combined) until he reach the acceptable level we call him strong learner (the resulting model we get after combining the models).