

Study on tree-based methods.

MATH 6380 project 2

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Outline

- 1 Introduction
- 2 American Crime Dataset
- 3 Kaggle 1: ComboDrug
- 4 Kaggle 2: Binray Drug
- 5 Analysis and Conclusion

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- There are yet many improvement methods.
- Studied the method on 3 datasets.

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The dataset

This dataset and the preprocessing are the same as project 1.

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Goal for this dataset

Do straightforward analysis and compare with Lasso (PJ 1).

What we found

Simple regression tree out-perform Lasso; bagging, random forest and boosting even better.

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Models and Kaggle Results

Dummy1

Models and Kaggle Results

Dummy1 Dummy2

Variable Importance

Dummy

Compared with p-value Selection

Dummy

Some Conclusions

We came up with some conclusions (inferences):

Some Conclusions

We came up with some conclusions (inferences):

① dummy1

Some Conclusions

We came up with some conclusions (inferences):

- 1 dummy1
- 2 dummy2

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