



Pittsburgh Bridges

BROOKE CALLAN MATH 3210

Roadmap

- ▶ Problem Description
- ▶ Background Information
- ▶ Methodology
- ▶ Results
- ▶ Issues
- ▶ Summary

Problem Description

- ▶ Create a rule set for classifying the Pittsburgh Bridges Data Set
- ▶ 107 Instances with 12 different attributes
- ▶ 7 attributes that predict the other 5

Background Knowledge

- ▶ Pittsburgh, Pennsylvania
- ▶ Engineering Bridges

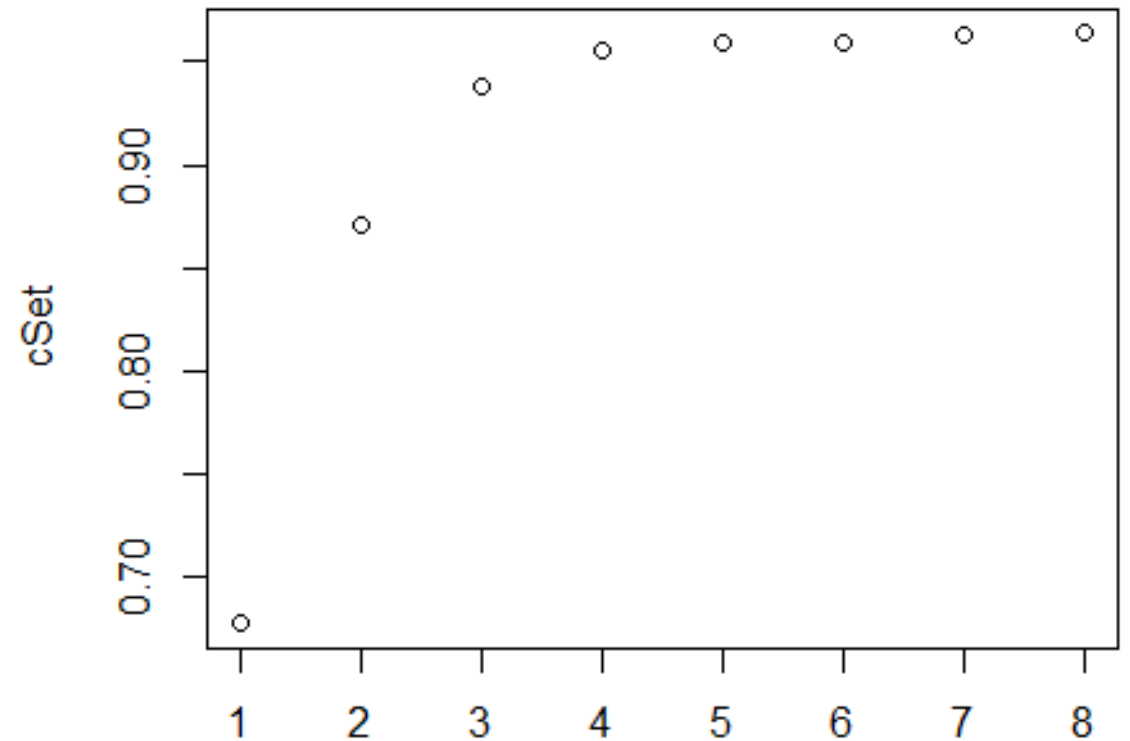
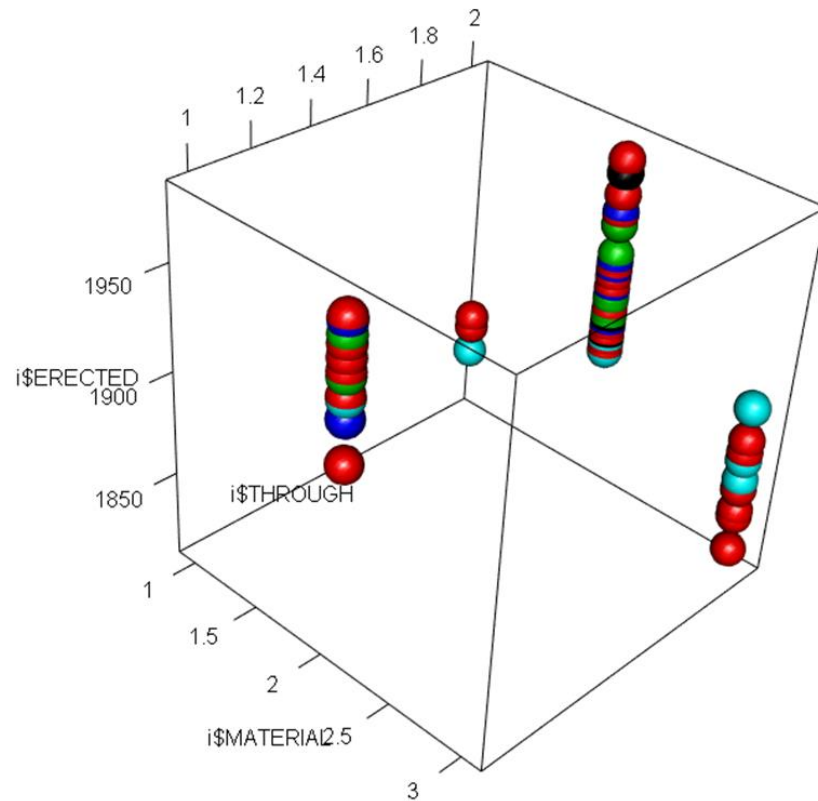


Methodology

- ▶ Clustering
 - ▶ K-means Clustering
- ▶ Classification Model
 - ▶ C5.0 Algorithm
- ▶ V-Fold Cross Validation

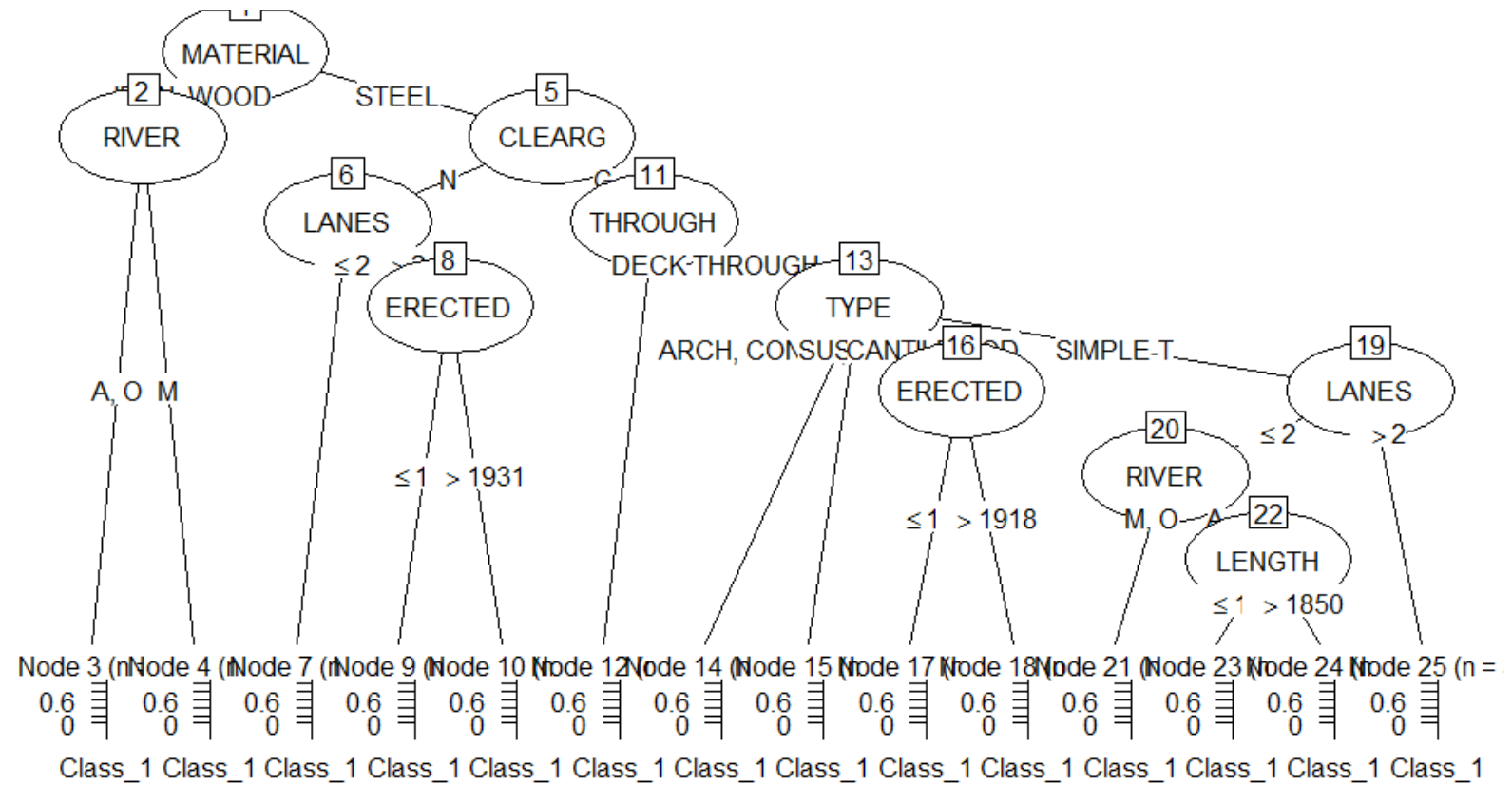
Results of Clustering

► 4 Clusters



Results of Classification

- ▶ Complex Classification Trees
- ▶ 71 Instances with 12 Attributes
- ▶ No sensible rules set



Issues

- ▶ Missing Data
 - ▶ K-means
 - ▶ C5.0
- ▶ Complexity of Results



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References

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Questions?

