



Predicting Tree Type in the Roosevelt National Forest

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Content

• Background and Methodology	3
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• Findings and Recommendations	5
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• Future Work and Next Steps	9
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• Questions	11
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Background and Methodology

Background & Methodology

- **Background**

- Predict tree types in the Roosevelt National Forest of Colorado

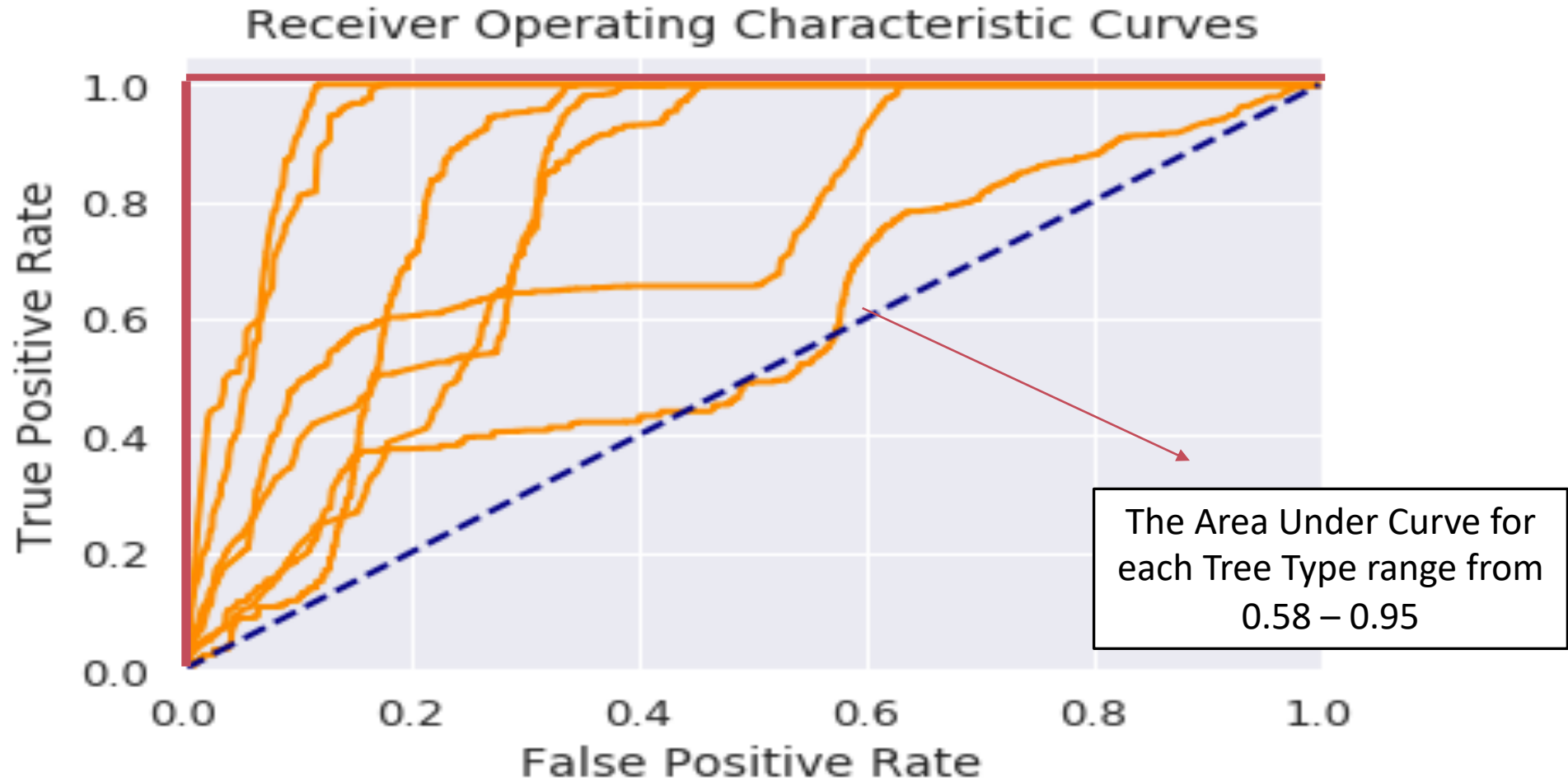
- **Methodology**

- Data collected: 7 tree types from 4 wilderness areas
 - Additional data features: shadow coverage, distance to nearby landmarks (roads, hydrology), soil type, and local topography (elevation, aspect, slope)
 - Data explored / analyzed
 - Machine Learning used to develop a model to best predict tree types in the Forest

Findings and Recommendations

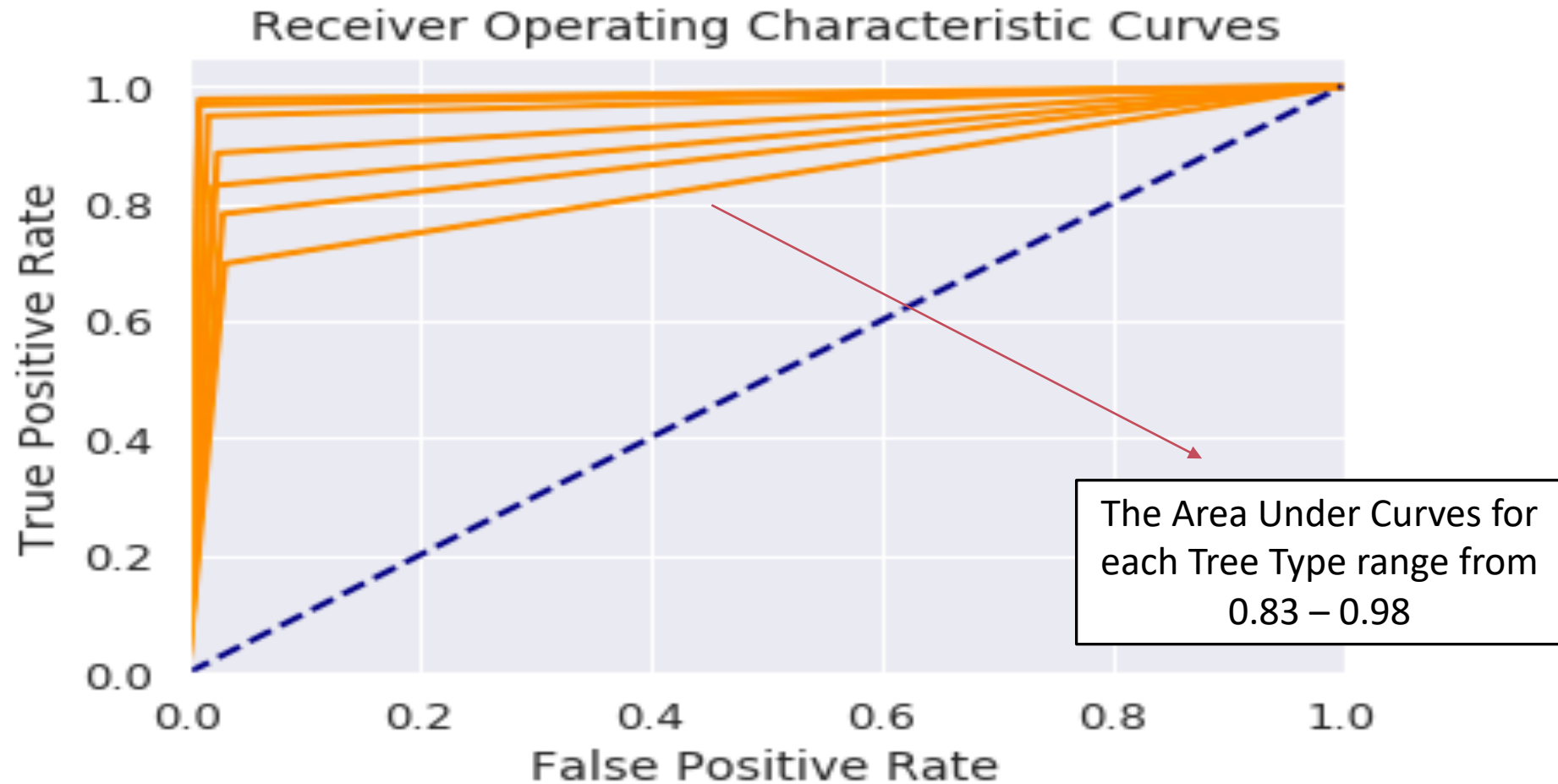
Machine Learning Algorithm

Adaboost



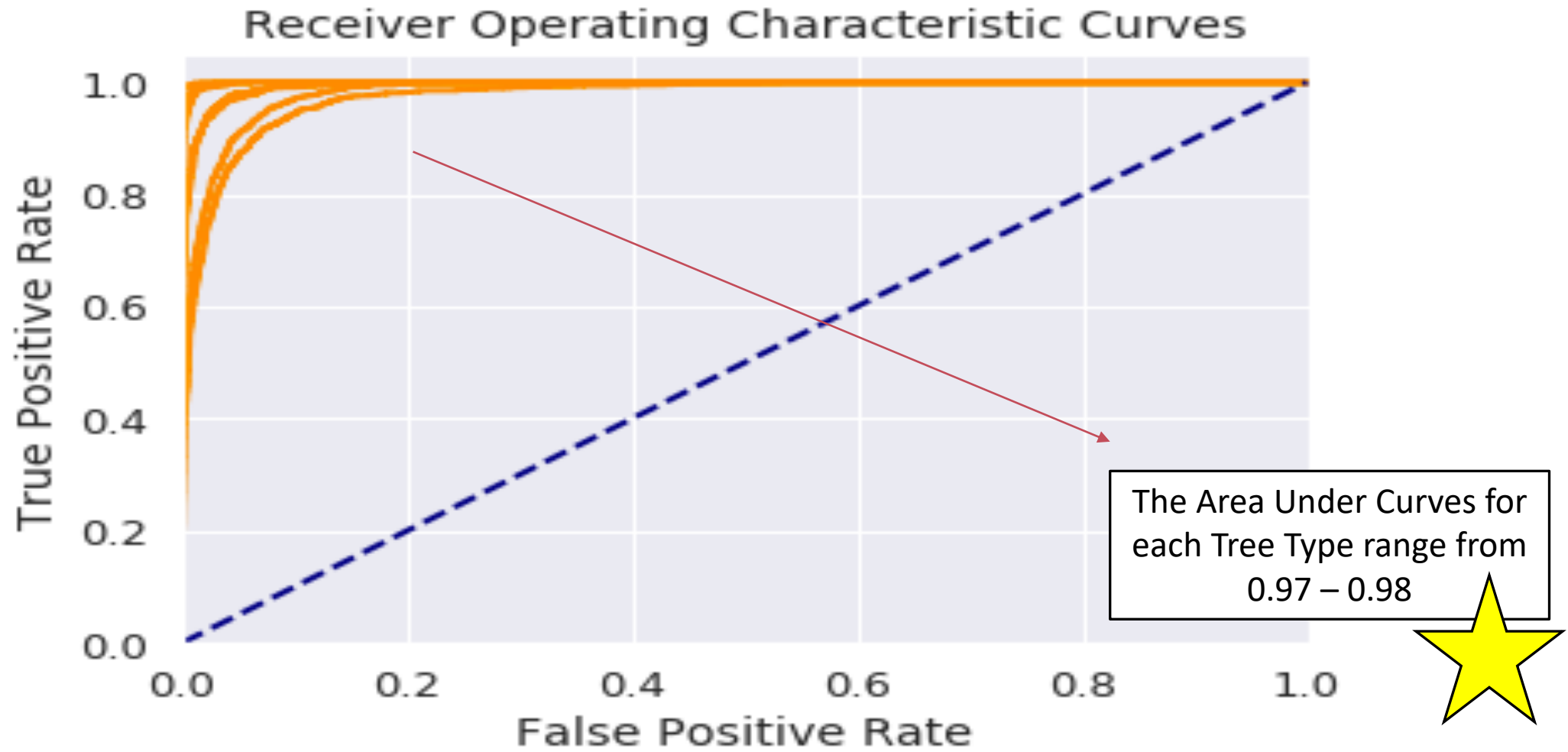
Machine Learning Algorithm

K-Nearest Neighbors



Machine Learning Algorithm

Random Forest



Future Work and Next Steps

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- Research further data to determine predictions for wildfires, and assisting in their prevention
 - Obtain data on the history of wildfires in the Roosevelt National Forest
- Determine if the Random Forest model developed will work for other forests in Colorado

Questions?

Thank You!