

INTRODUCTION

Primary objective: Provide the Department of Education with a model that explains the factors that influence certain learning modalities:

- In-person
- Hybrid/Remote

Variables:

- Spending per Student
- Student Enrollment Rate
- Poverty Rate
- Student Demographics

DATA

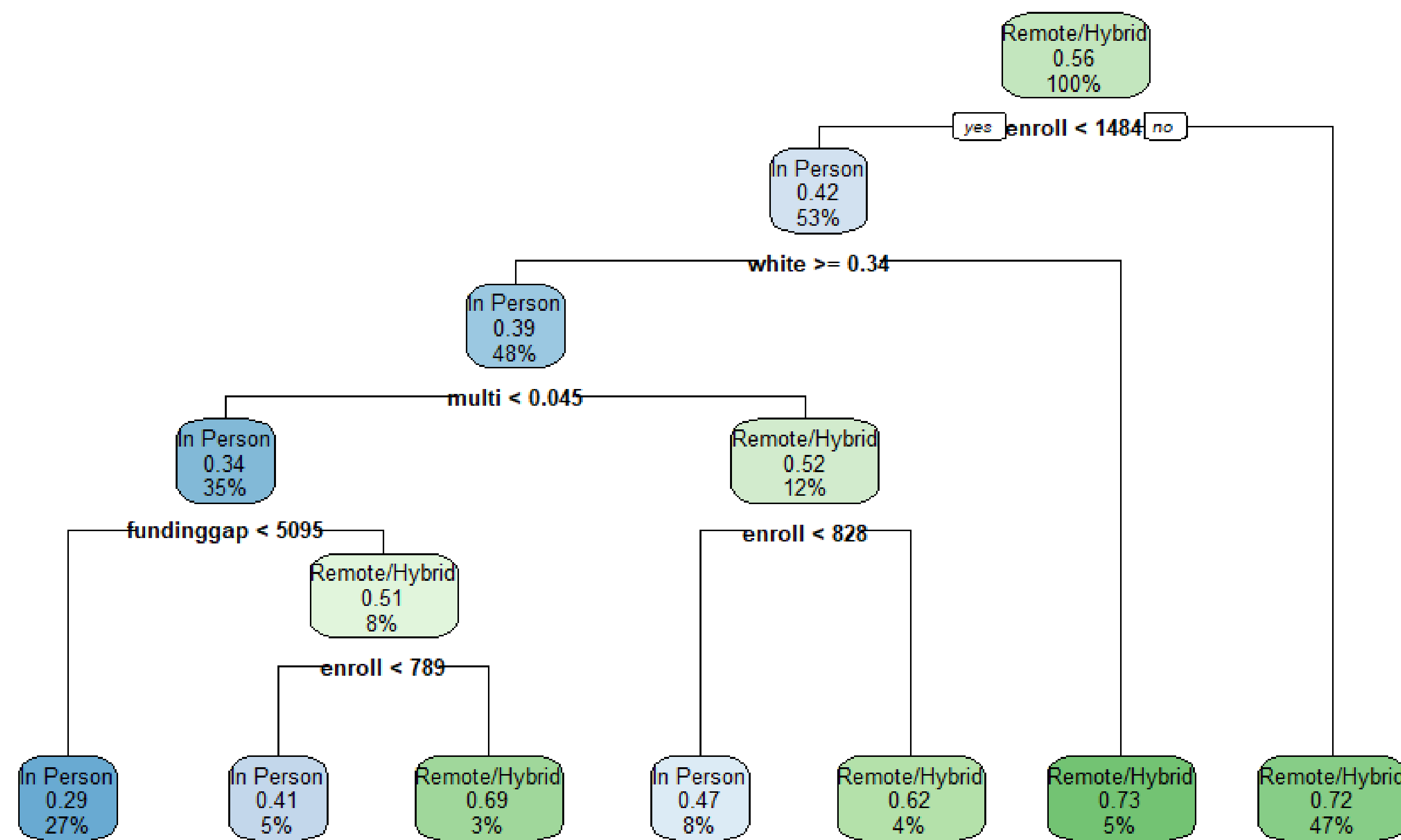
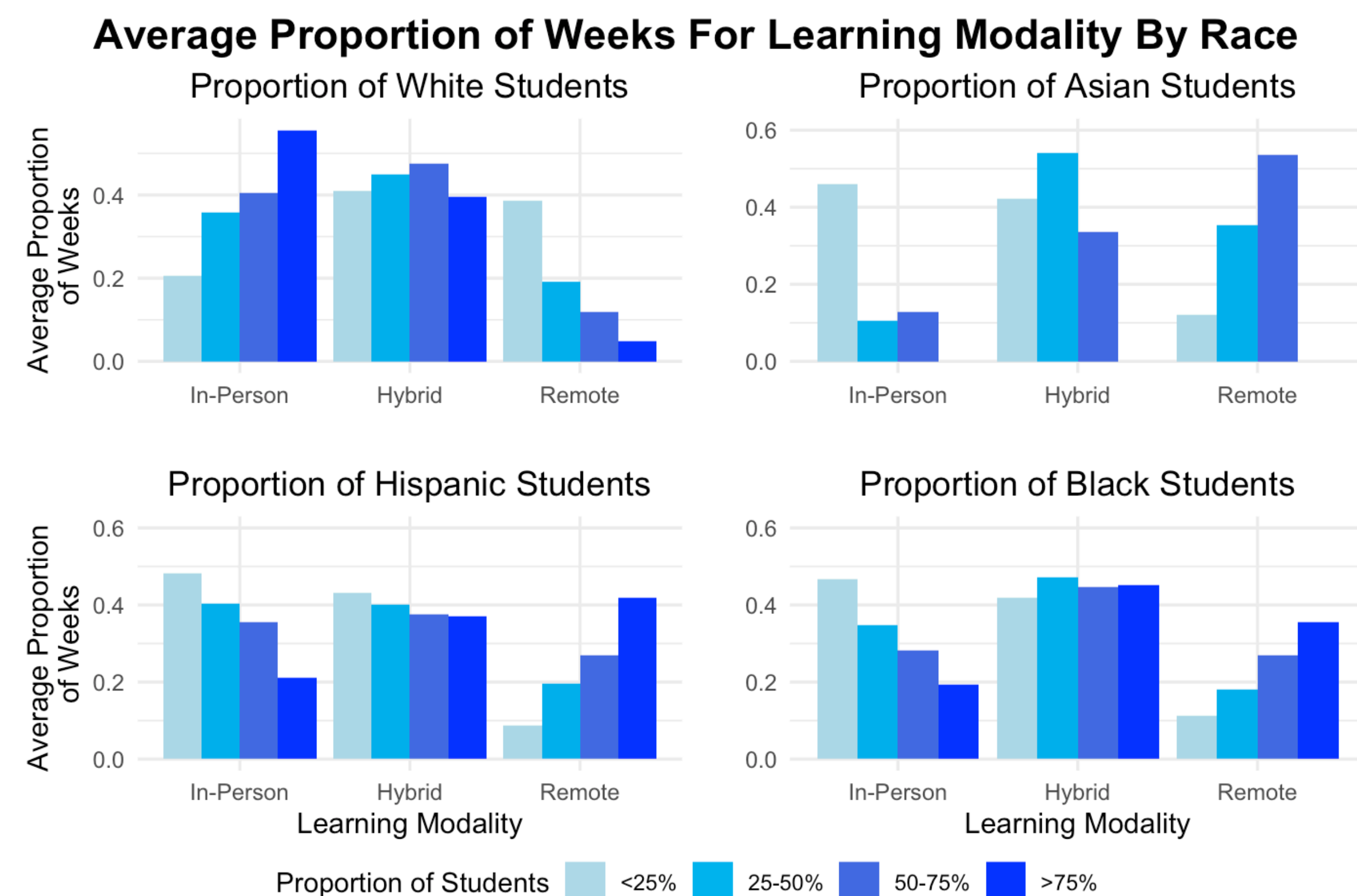
School Learning Modalities, 2020-2021, Centers for Disease Control and Protection.

District Cost Database 2024 (4th Release, School Finance Indicators Database.

MODEL SELECTION

- Logistic Regression
- **Decision Tree**
- Bagging
- Random Forests

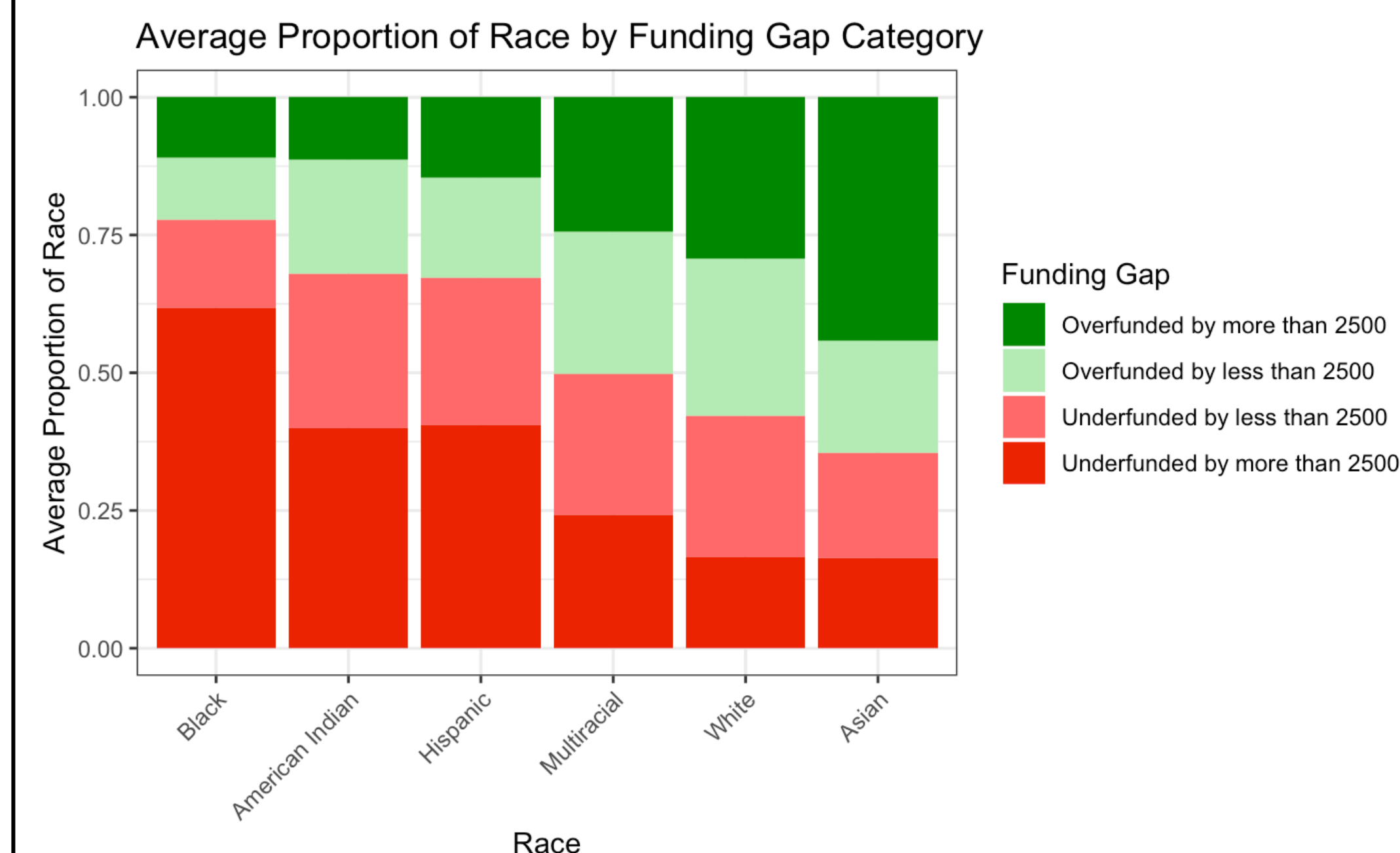
KEY FINDINGS/ANALYSIS



Decision Tree Analysis
Accuracy: 75.7% ROC-AUC: 72.2%

CONCLUSION

- Larger districts tended to adopt hybrid and remote learning
- Districts with more diversity (smaller proportion of white students) were less likely to stay in person
- Less diverse districts with a worse funding gap were more likely to stay in person



CONSIDERATIONS & LIMITATIONS

- Publicly available data
- Missing IEP data
- Unclear terminology

REFERENCES

Anderson, Monica, et al. "How Teens Navigate School during Covid-19." Pew Research Center, Pew Research Center, 2 June 2022, www.pewresearch.org/internet/2022/06/02/how-teens-navigate-school-during-covid-19/.

Bacher-Hicks, Andrew, et al. "Inequality in household adaptation to schooling shocks: Covid-induced online learning engagement in Real time." Journal of Public Economics, vol. 193, Jan. 2021, <https://doi.org/10.3386/w27555>.