

Austin (TX) Animal Center

Cat Adoption Predictor

Chuck Cao



What's My Project?

- Predicting whether a cat will be adopted or not from the Austin Animal Center
- Takes in over 18,000 animals a year
- Help with planning and space concerns

Description of Data

- Combined Austin Animal Center's Intake and Outcomes dataset tables
- ~51,000 rows on cats alone
 - Numerical columns are time-related (taken in/outcome, age)
 - Categorical are cat and intake-related
 - ~24,000 Adoptions, ~21,000 Transfers, ~5,500 Other Outcomes
- Unique instances (~42,000)



Features

- Numerical:
 - Age in Years*
 - Time Since Intake (days) *

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- Numerical:
 - Age in Years*
 - Time Since Intake (days) *
- Categorical:
 - Sex&Spayed/Neutered, Sex*, Spayed/Neutered*
 - Breed
 - Color
 - Intake Type
 - Intake Month*
 - Intake Condition
 - No Known Owner*

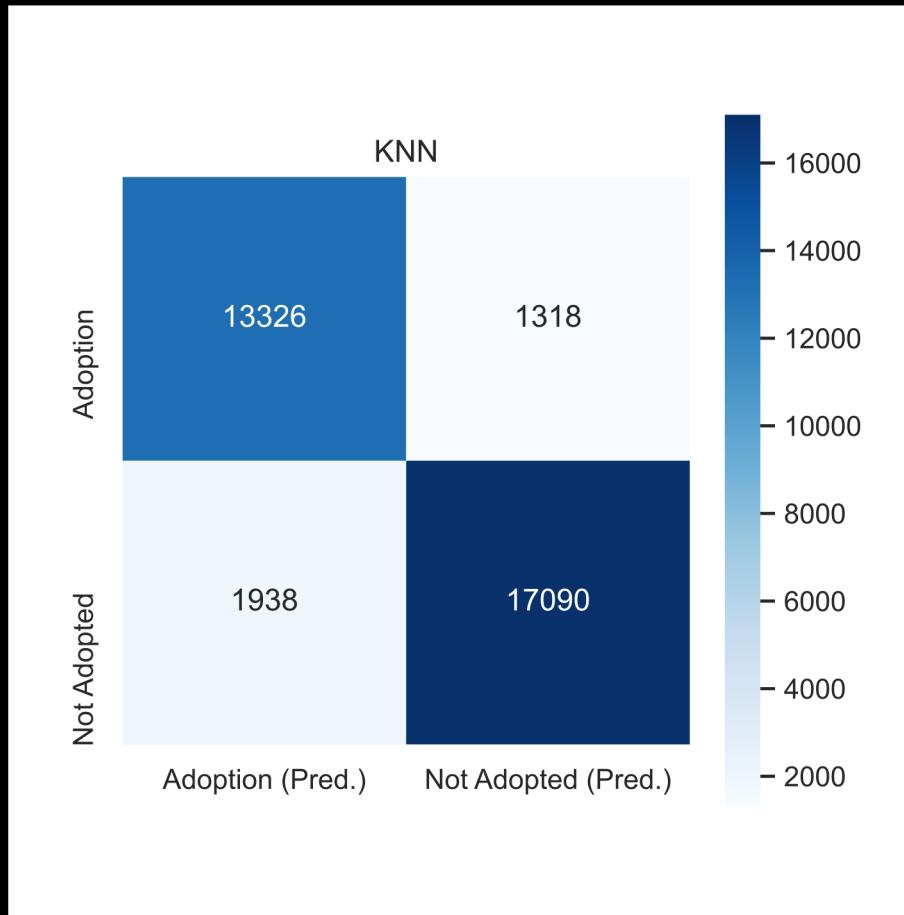
Model Comparisons

	Precision	ROC-AUC
KNN (k=5)	0.83	0.93
Logistic Regression	0.81	0.93
Bernoulli Naïve Bayes	0.73	0.88
Decision Tree	0.85	0.86
Average Voting Classifier	0.86	0.94

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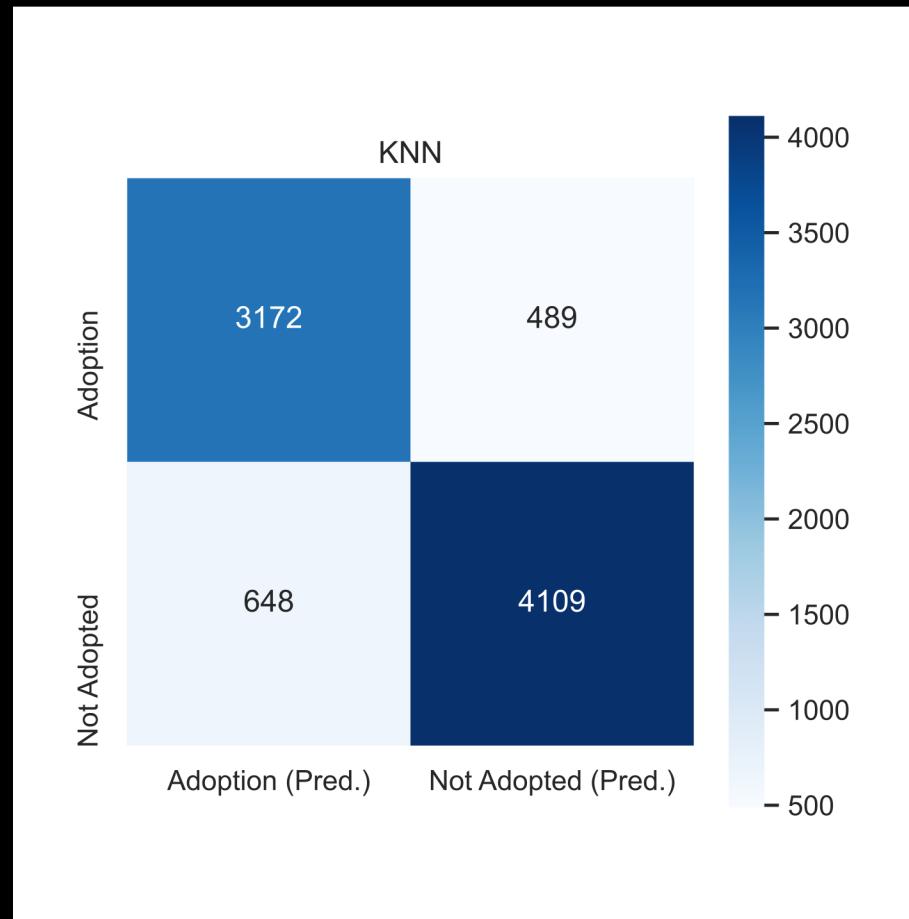
Trained Model



- Accuracy – 90%
- Predict Majority – 57%
- Precision – .87

Final Model

- Accuracy – 86%
- Predict Majority – 57%
- Precision - .83



Next Steps

- Dig Deeper into features
 - Clean and determine more features
 - Notable events
- Try other classification models
- Build app/interface for visual effect
- Switch to a predictive model

Questions?

