

NCAAM March Madness Upsets

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Past First Round Upsets

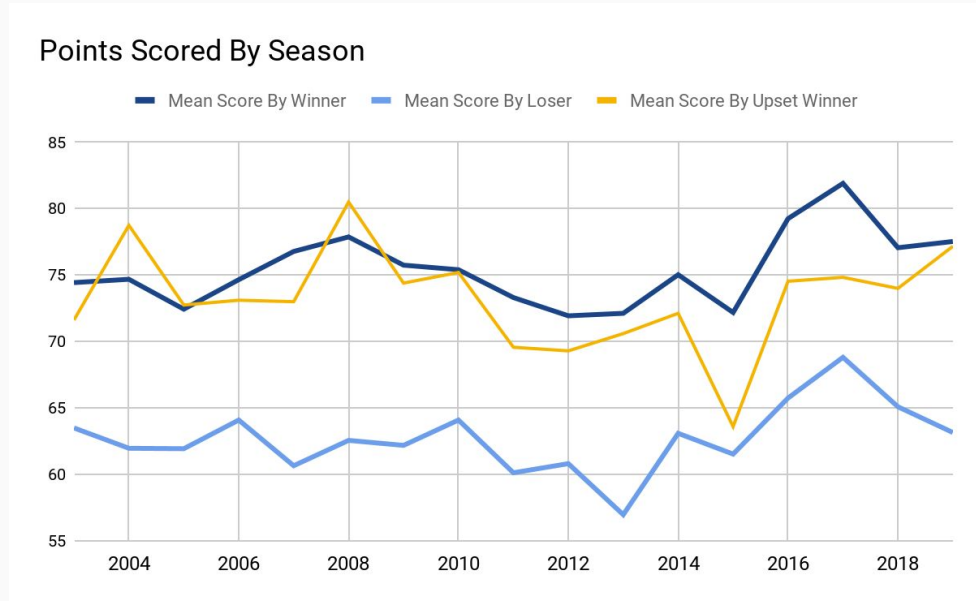


2012 Lehigh (15) defeats Duke (2)

2018 UMBC (16) defeats Virginia (1)

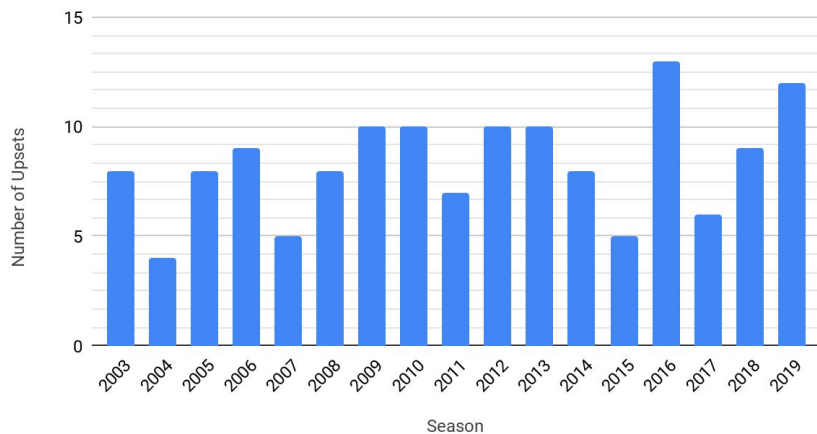


Historical Data

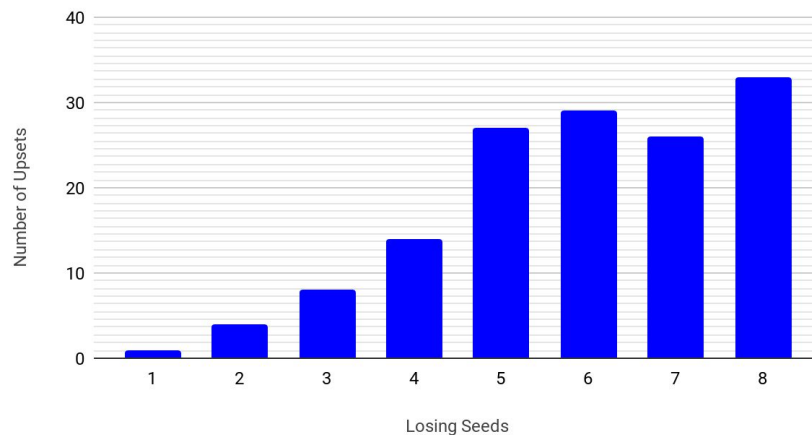


Historical Data

Number of Upsets By Season



Number of Upsets By Losing Seeds



Coach Tenure



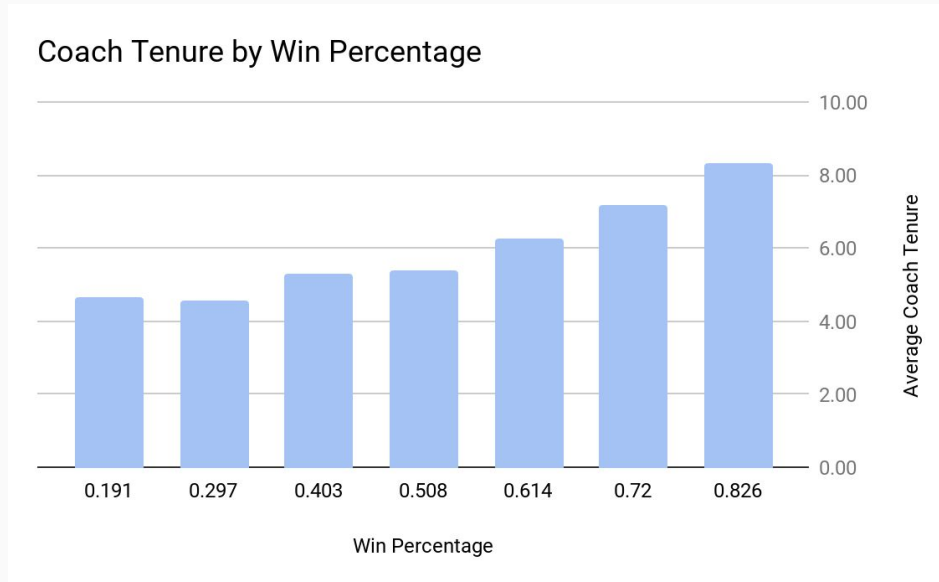
Tom Izzo: 628–241 (.723)
52–21 (.712) NCAA Tournament



Mike Krzyzewski : 1,157–350 (.768)
97-30 (.764) NCAA Tournament



Coach Tenure vs. Tournament Success

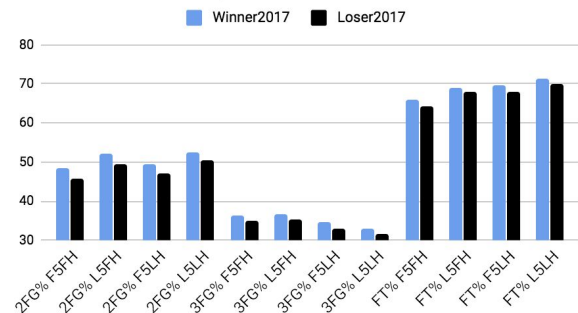


A Game Of Runs

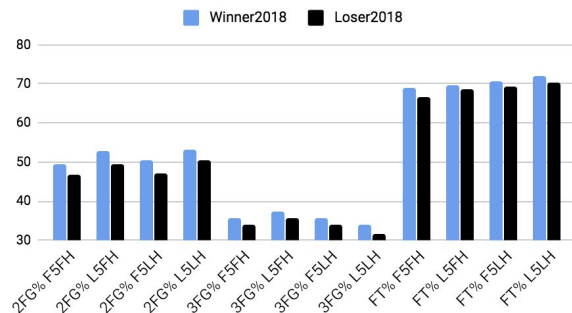


Shooting Percentages First 5, Last 5

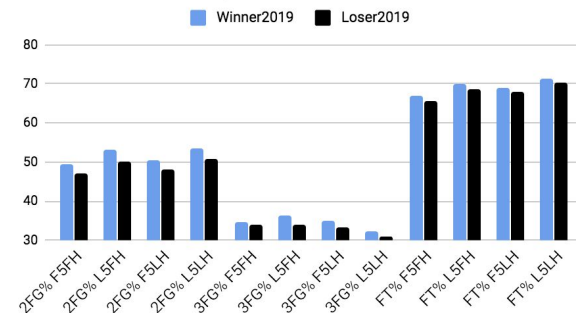
Field Goal Percentages 2017



Field Goal Percentages 2018



Field Goal Percentages 2019



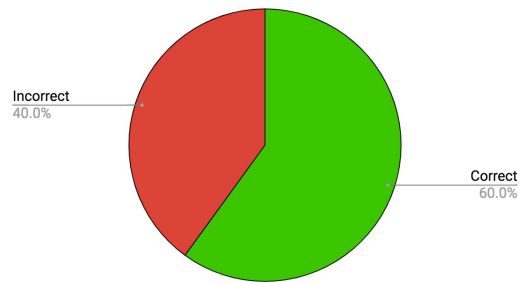
Predictors and Predictions

Results

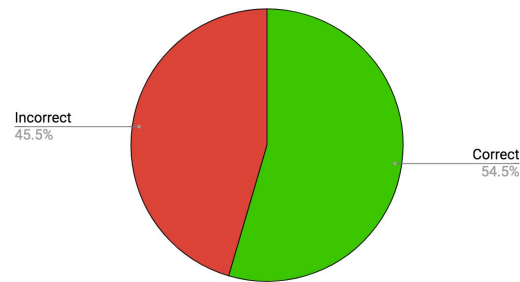
Correct	Incorrect
9 v 8 (5)	9 v 8 (2)
10 v 7 (2)	10 v 7 (3)
11 v 6 (1)	11 v 6 (3)
12 v 5 (3)	12 v 5 (0)
13 v 4 (1)	13 v 4 (2)

Total: 12/23 games predicted correctly

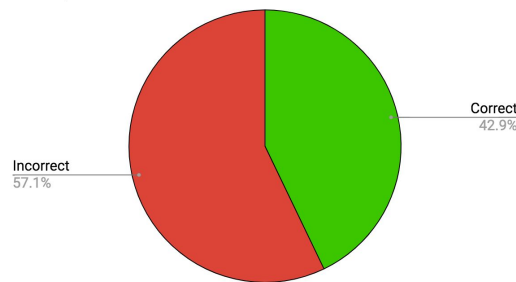
2017 Upsets



2019 Upsets

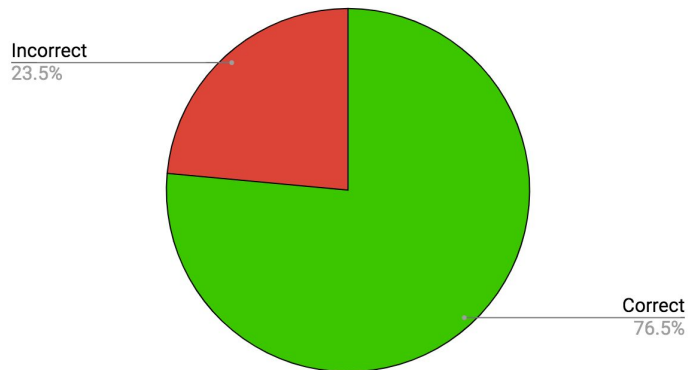


2018 Upsets



Results

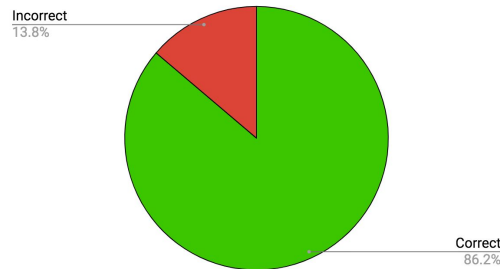
Total First Round



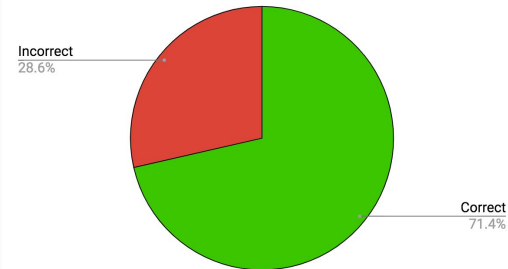
Total: 65/85 games predicted correctly
76.5% Accuracy

True Positive Rate: 73.1%
True Negative Rate: 79.5%

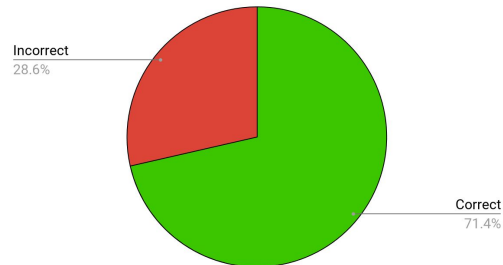
2017 First Round



2018 First Round



2019 First Round



Feature Importance

- The average 2-point field goal percentage difference for lower ID team
- The average free throw percentage difference for lower ID team
- The average score difference for higher ID team
- The average steal difference for lower ID team
- If the location is neutral for lower ID team
- The average net rating of higher ID team
- The average true shooting of higher ID team
- The average 2 point field goal percentage of first 5 minutes of the first half for the higher ID team

Future Work

- Include individual player significance
- Include secondary tournament results
- Include past tournament results
- Structure dataset to predict upset rather than lower ID team winning
- Find better parameters for classifiers

Thank You