

Kobe Bryant Shot Selection Project

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Dataset: [Here](#) - Codes: [Here](#)

Kobe's Action



Actions with higher frequency:

1. Jump Shot
2. Layup Shot
3. Slam Dunk Shot

Mater of Jump Shot

vs Spurs: 1978 (max)
vs Hawks: 519 (min)

Shots against Opponents



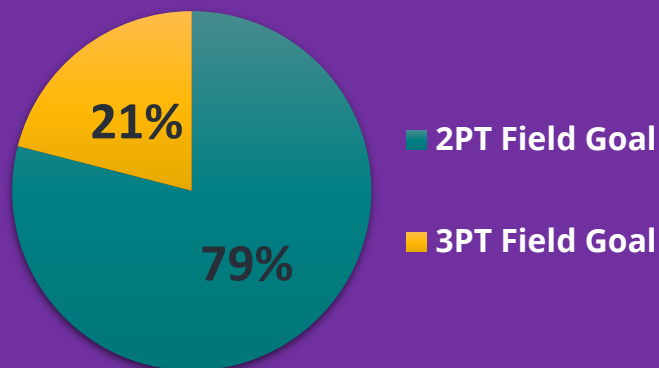
1978

519

■ ATL
■ SAS

30,697 shots

33,643 points

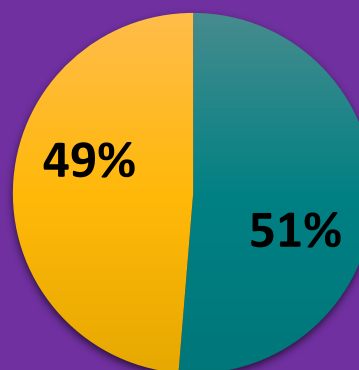


Shot Type by Point



Vote 2PT shots

More Games Away



Home - Away



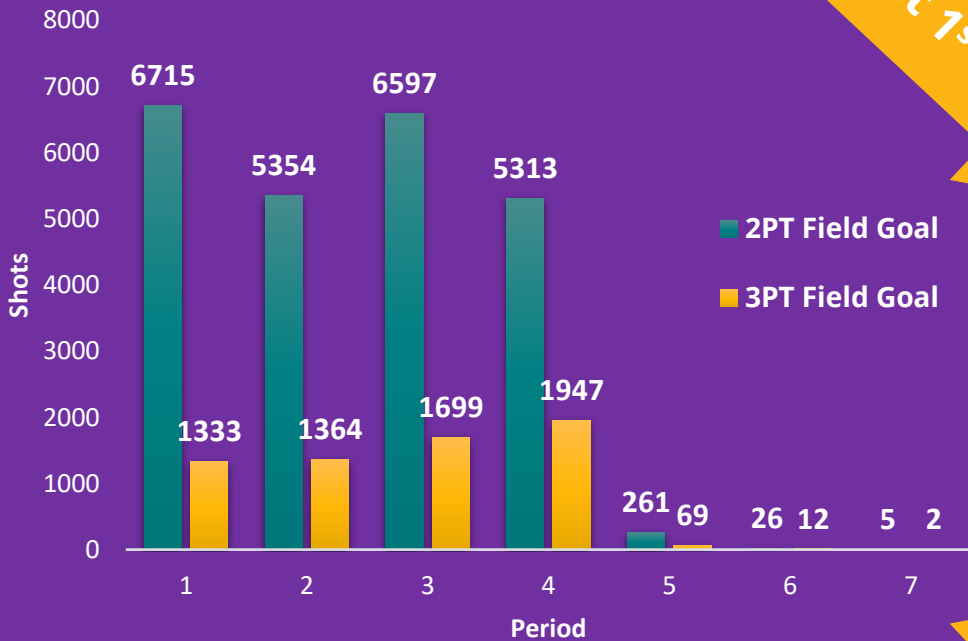
Tools: R & Python



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Shots by Period



1st period: most 2PT shots
4th period: most 3PT shots

Shots by Period

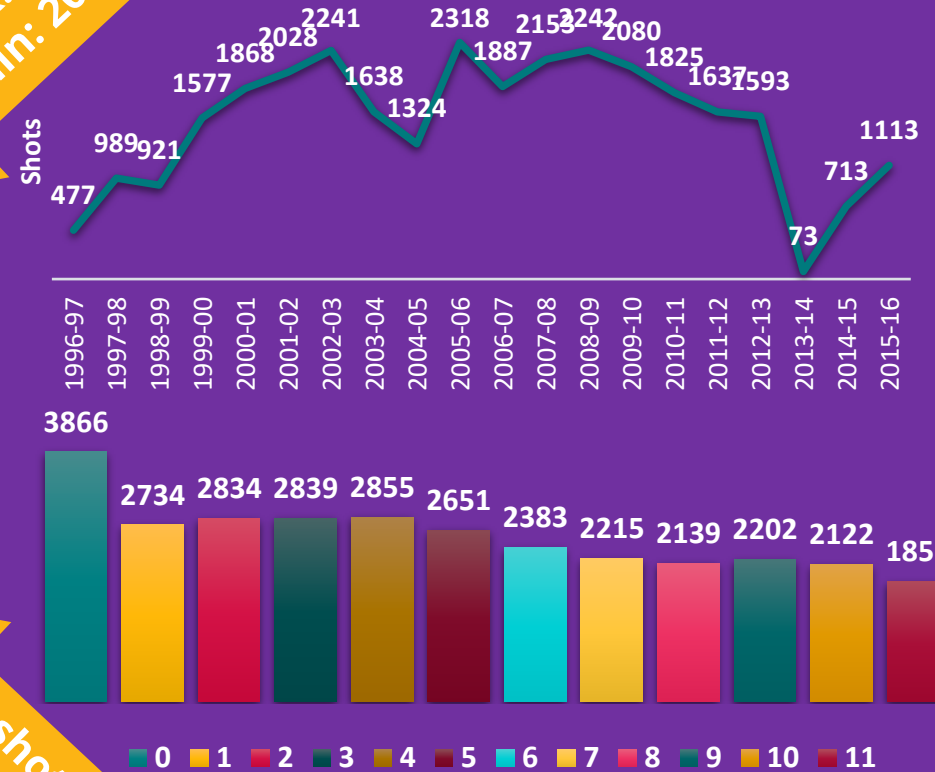


Risky at 4th period

Shots per Season



max: 2005-06
min: 2013-14



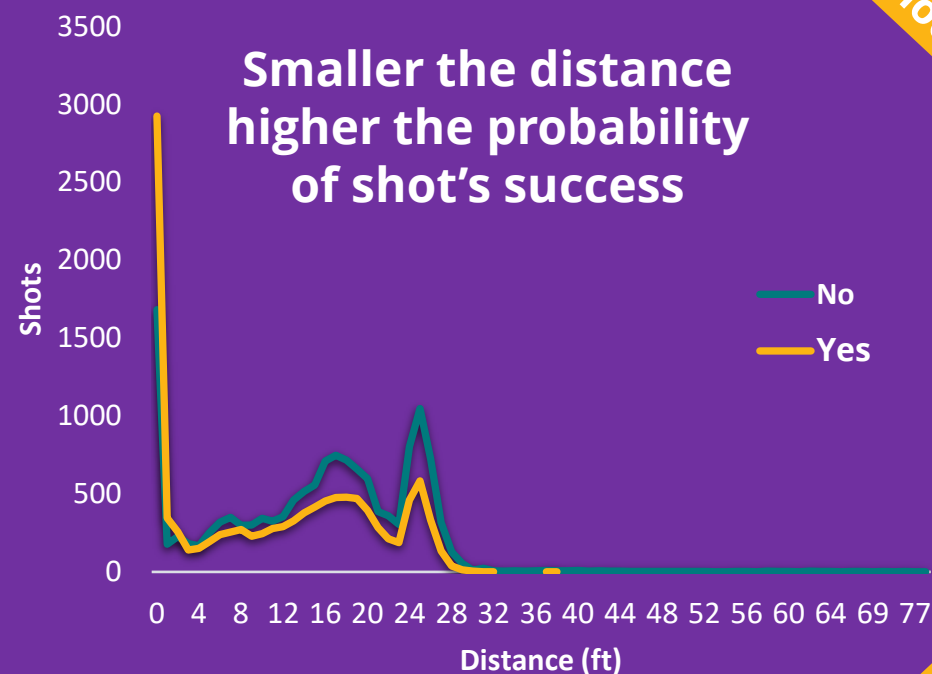
Most shots in the final minute

Shots by Minute



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Success vs Distance

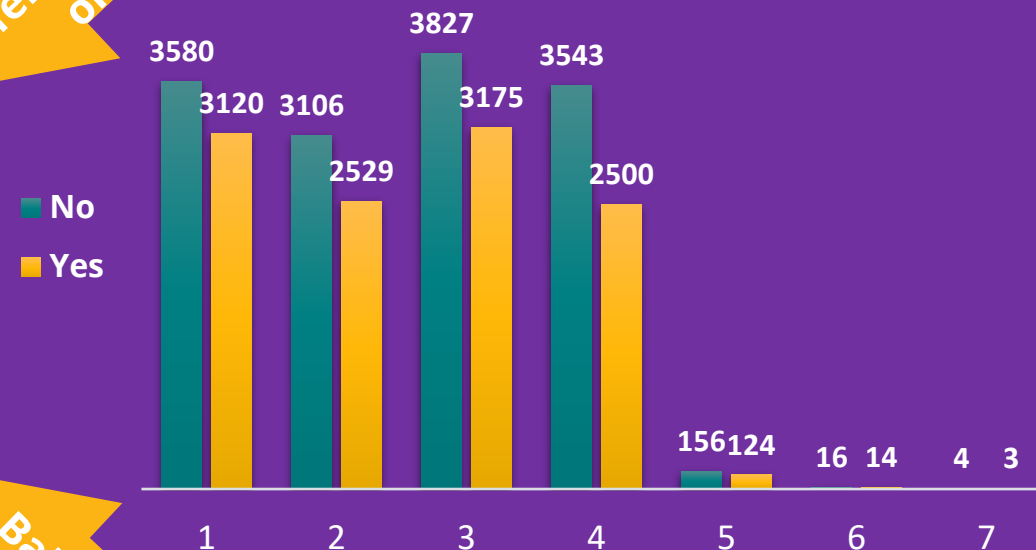


Distance's influence on shooting



1st and 3rd periods differ from 2nd and 4th on success

Success vs Period



Balanced situation in overtimes

Success vs Distance



Higher risk on longer distances

Success vs Period

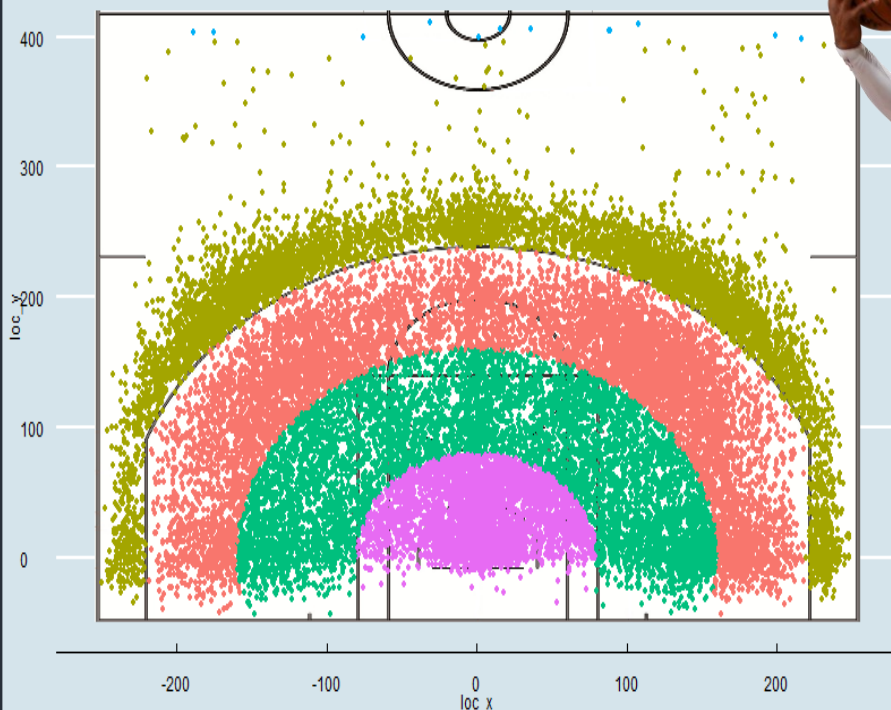


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Shot Range on the court

Shots Represented on the court based on Range

shot_zone_range • 16-24 ft. • 24+ ft. • 8-16 ft. • Back Court Shot • Less Than 8 ft.



Success' Ratio (2pt): 0.48
Success' Ratio (3pt): 0.33

Yes
No

Success' Ratio (A): 0.44
Success' Ratio (H): 0.46

Yes
No

Shots Type vs Success



9683

10602

2PT Field Goal

5766

7446

Away

1782

3630

3PT Field Goal

5699

6786

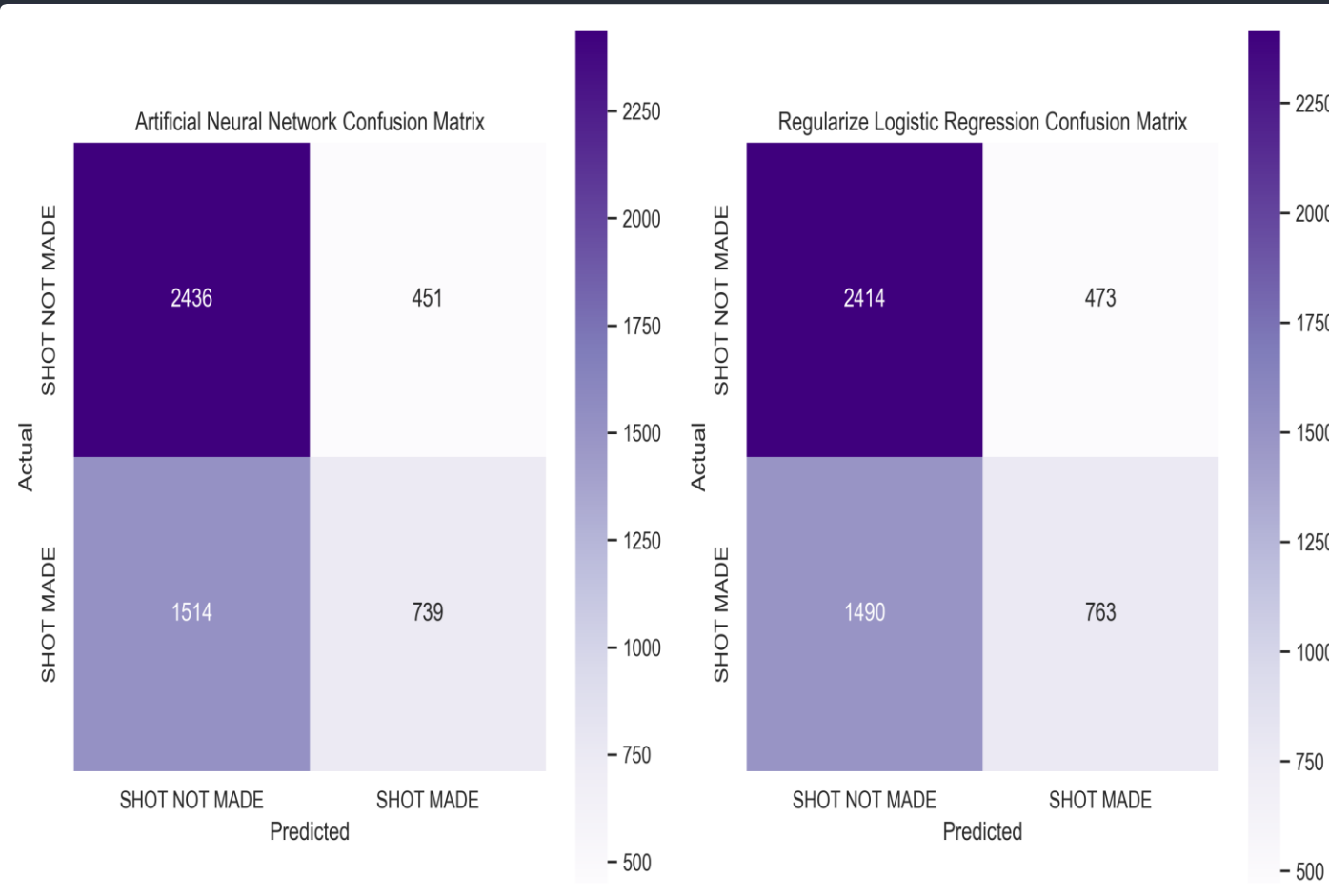
Home



Home/Away vs Success

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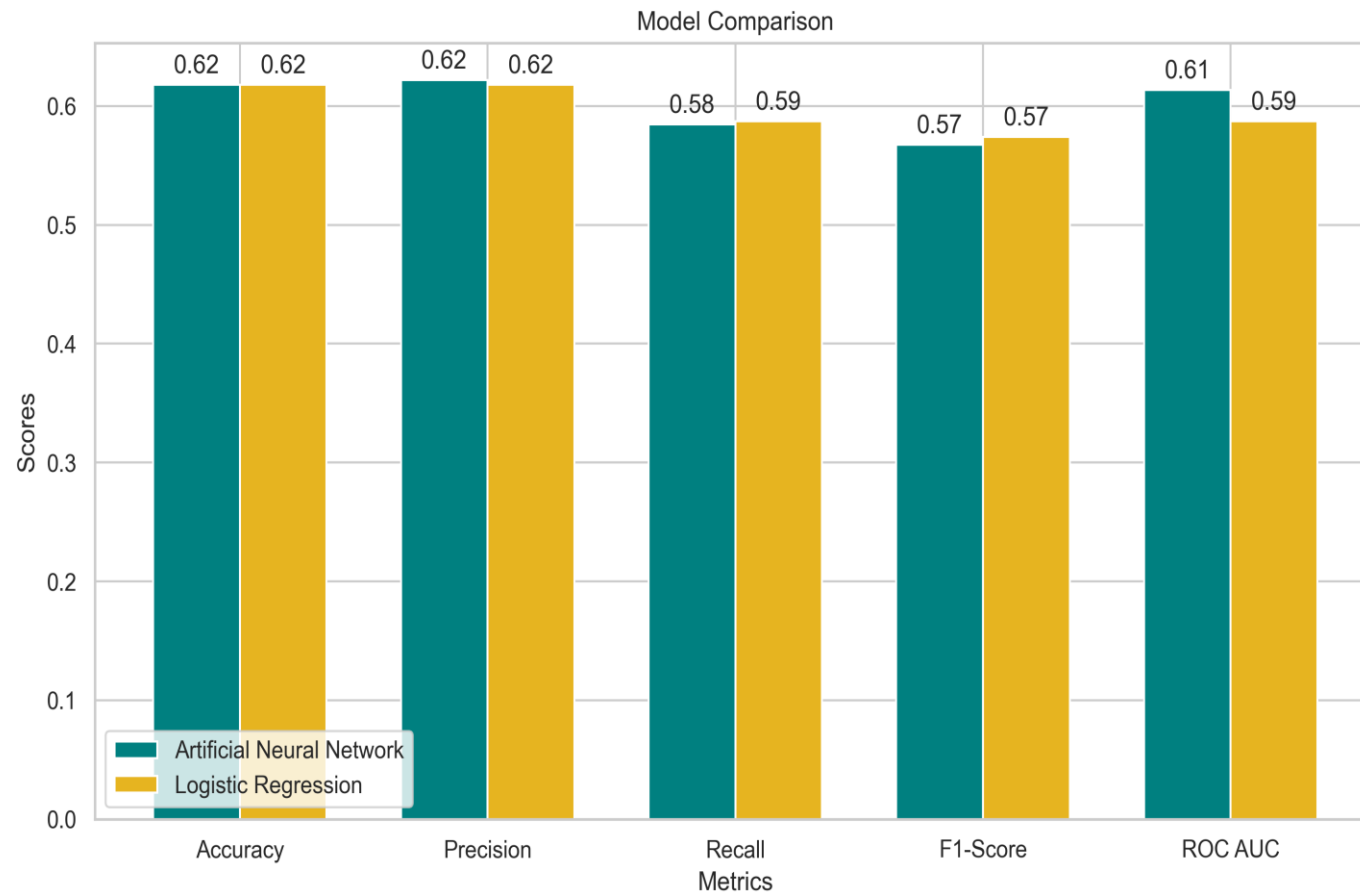
Confusion Matrix for Artificial Neural Network and Logistic Regression Model



The 2 best models for the Kobe's shots result predictions were Artificial Neural Network & Logistic Regression Model

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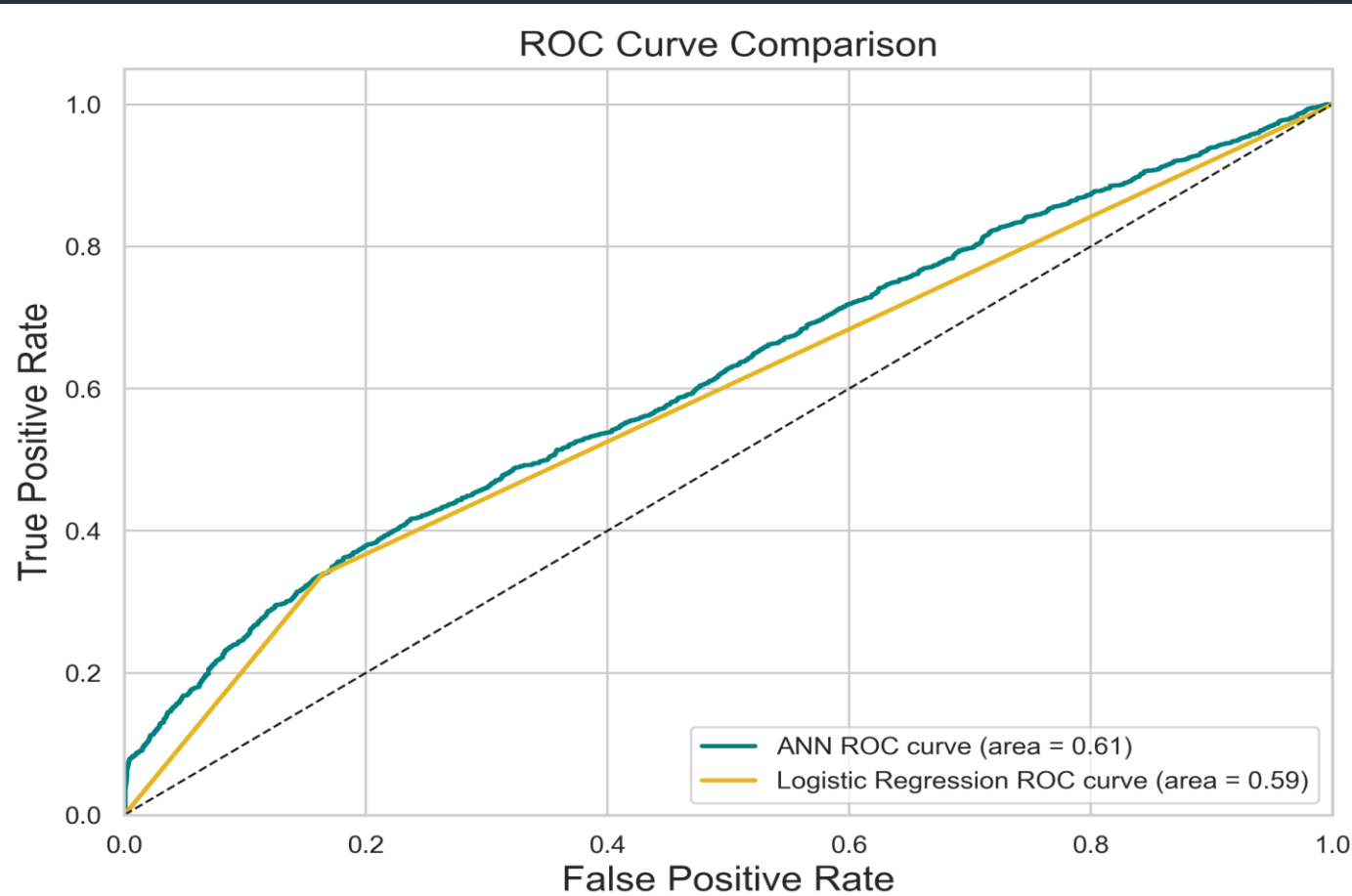
Model Comparison for Kobe's Shot Prediction



Accuracy: ANN \approx LR
Precision: ANN \geq LR
Recall: ANN \leq LR
F1-Score: ANN \leq LR
ROC AUC: ANN $>$ LR

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Roc Curve Graph



Based on the ROC Curve the Artificial Neural Networks are better model than Logistic Regression for the Kobe's Shot Prediction