

# NBA FREE AGENT FORECAST

Data-driven scouting: Predicting NBA players impact and value.



# *THE POWER OF DATA IN SCOUTING*

## Advanced Analytics

- Stats
- Data
- Models
- Predictions

## Eye Test

- Experience
- Intuition
- Instincts
- Intangible

?Complementary or Conflicting?





# PROJECT OBJECTIVE

Providing GMs with advanced statistical tools to make informed decisions about the trade market and, most importantly, the signing of free agents, optimizing player selection and contracts based on projected performance.



A large, semi-transparent silhouette of a basketball hoop and net is positioned on the left side of the slide, angled towards the center.

# GAME SCORE PREDICTOR

## Key insights

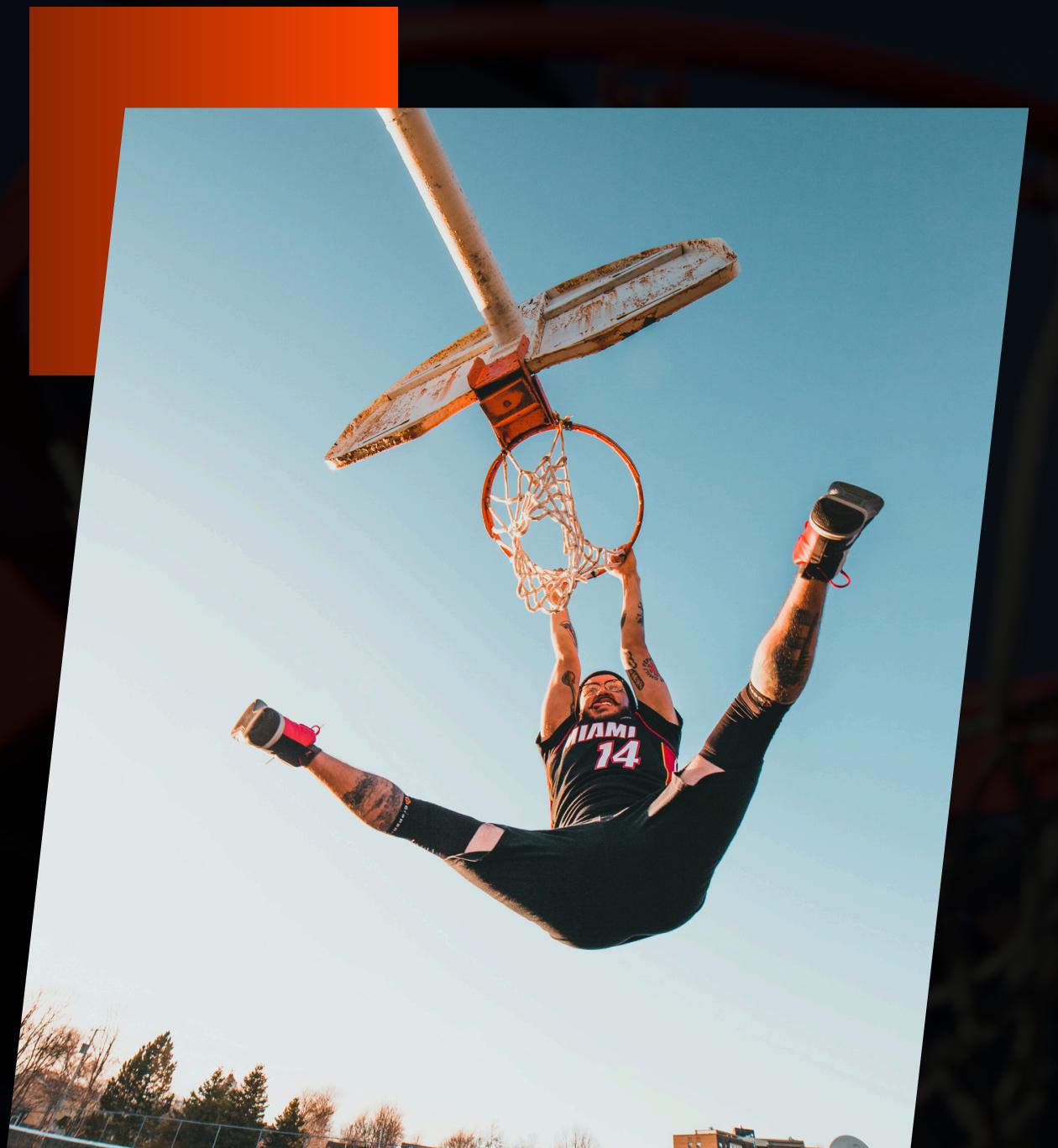
**Approach & data:** Regression models to predict player performance based on early-season stats.

**Key steps:**

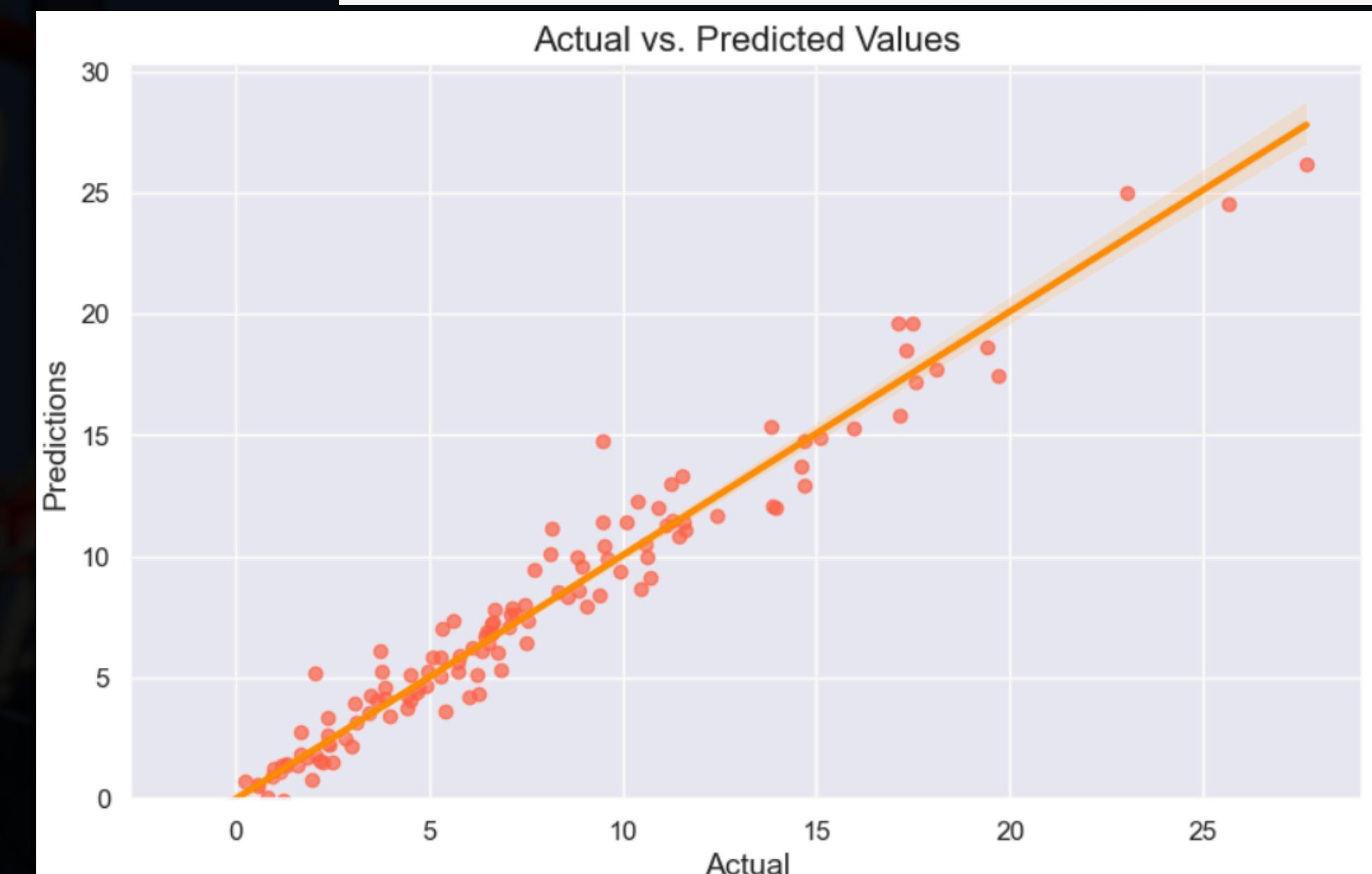
- Feature selection & correlation analysis
- Model comparison & performance evaluation

**Why it matters?** Helps GMs identify high-impact players efficiently.

# Model Selection & Reporting



Model	Linear Regression	Ridge	Lasso	Decision Tree	KNN	XGBoost
R <sup>2</sup>		0.96	0.96	0.88	0.86	0.86
RMSE		1.15	1.14	1.97	2.12	2.15
MSE		1.31	1.30	3.89	4.50	4.61
MAE		0.85	0.83	1.45	1.51	1.57





# NBA PLAYERS CLUSTERING



## Key insights

**Approach & data:** K-means algorithm used to segment players into 4 distinct groups defined by main stats like points, rebounds, assists and minutes played.

### Player groups:

- Superstars: High scoring and impactful players.
- All-Stars: Consistent contributors and solid big men.
- Role players: Specialized skills and second unit players.
- Prospects and Bench Players: Unexperienced with potential and low overall impact players.

**Why it matters?** Helps GMs target the most valuable players according to specific team needs like salary cap and team fit.



# THANK YOU!

Jorge de Cos

