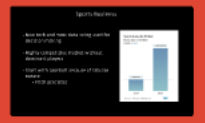
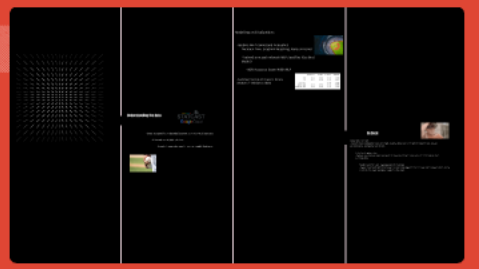

Predictions and Decisions:


Agenda
Sports Business/Fans' mindset
Data
Modelling
Recommendations/Next Steps


Sports Business



Predictions and Decisions:

Investing in Baseball and Sports Analytics

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Agenda:

Sports business/first model

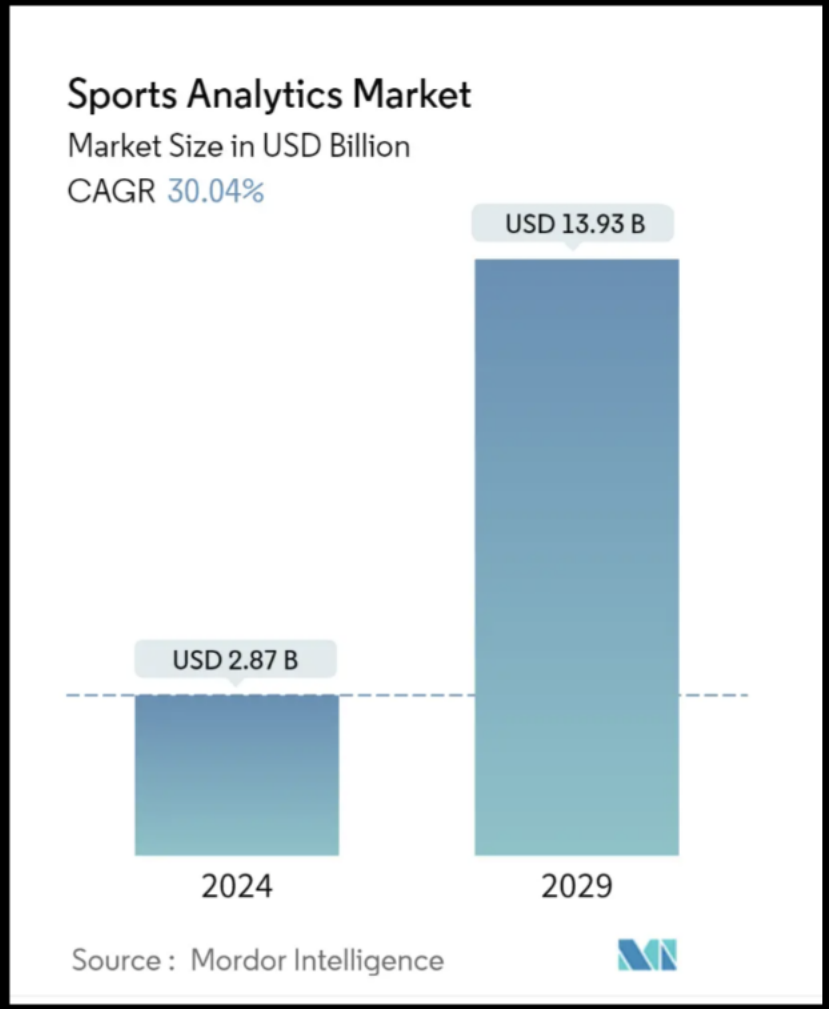
Data

Modeling

Recommendations/Next Steps

Sports Business

- New tech and more data being used for decision making
- Highly competitive market without dominant players
- Start with baseball because of tabular nature
    - Pitch predictor



Understanding the data:

STATCAST
POWERED BY Google Cloud

-Data scraped from baseballsavant.com via MLB Statcast

-Filtered to 92,000 pitches

-Created new columns to use as model features

Modeling and Evaluations

-Models We Trained and Evaluated

Decision Tree, Gradient Boosting, Random Forest

-Trained a neural network MLPclassifier (Our Best Model)

-60% Accuracy Score With MLP

-Switched From Multi Class to Binary because of imbalanced data

	precision	recall	f1-score	support
FB	0.62	0.68	0.65	12419
OS	0.57	0.50	0.53	10537
accuracy			0.60	22956
macro avg	0.59	0.59	0.59	22956
weighted avg	0.60	0.60	0.59	22956

On Deck:

Data Enhancement:
-Collect more comprehensive and high-quality data related to pitch trajectories, player performance, and game conditions.

A Feature Engineering:
-Explore new feature engineering techniques to extract more relevant information from existing data.

Model Selection and Hyperparameter Tuning:
-Experiment with different machine learning algorithms or deep learning architectures to identify the most suitable model for the task.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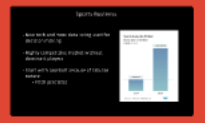
Sports Business