

Capstone 2 Project Ideas

NFL Big Data Bowl 2024: [P](#)

Help evaluate tackling tactics and strategy

- 1) Generating actionable, practical, and novel insights from player tracking data corresponding to yards saved, tackle value, missed tackles.
- 2) The coaching staff of Nfl teams. Will provide insight on who are better players.
- 3) <https://www.kaggle.com/competitions/nfl-big-data-bowl-2024/data>
Provided by NFL Next Gen Stats team
- 4) Start with a linear regression model then maybe try a different regression model to see if the performance can be improved.
- 5) I expect that the coaching staffs' will use the data to determine who will play in certain situations. They could also use the data to shape the rosters with players who have better stats.

Flu Shot Learning:

Predict H1N1 and Seasonal Flu Vaccines

- 1) Predict whether people got H1N1 and seasonal flu vaccines using information they shared about their backgrounds, opinions, and health behaviors.
- 2) Vaccine makers, Hospitals, health insurance companies, a;; could be possible stakeholders.
- 3) <https://www.drivendata.org/competitions/66/flu-shot-learning/data/>
- 4) Decision Tree and Fuzzy Clustering
- 5) The number of people predicted to get either or vaccination could impact production numbers and order numbers of the vaccines.

Optiver - Trading at the Close:

Predict US stocks closing movements

1) Develop a model capable of predicting the closing price movements for hundreds of Nasdaq listed stocks

2) Investment firms, Stock Brokers, Individual traders

3) The Data is available at
<https://www.kaggle.com/competitions/optiver-trading-at-the-close/data>

4) A combination of Long Short-Term Memory (LSTM) Networks, Random Forest, and maybe Gated Recurrent Unit

5) The closing price could be used to help determine if a stock is bought sold or held onto.