U.P.E. Alpha Presentation

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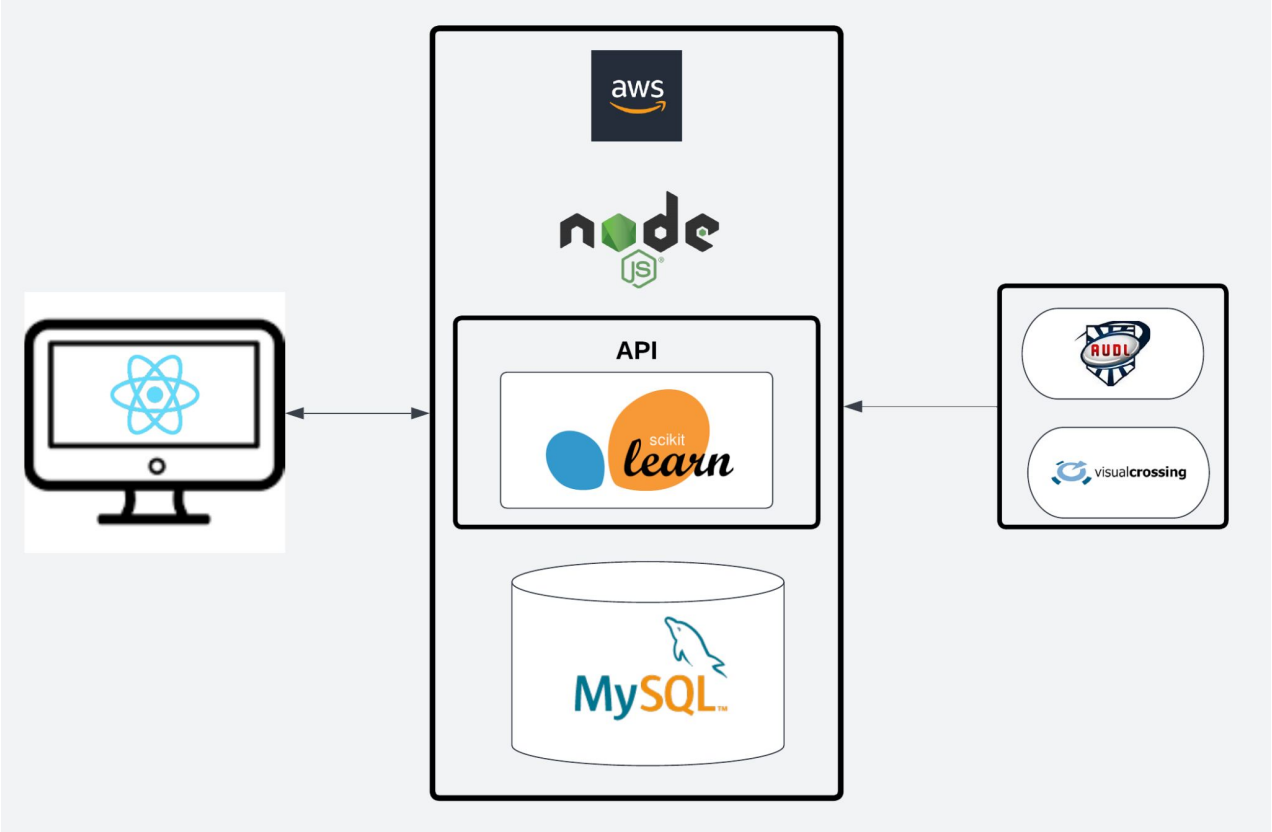
What is the Ultimate Prediction Engine?

- Prediction App for the AUDL
  - Team and Player records
  - Weather Conditions
- Accurate Predictions for Upcoming Games
  - Live Updates
- Customized Predictions
  - Two existing or custom teams
  - Specify weather conditions

System Overview



AUDL Integration to Support Vector Machine

Team Statistics

- Wins
- Losses
- Completion Percentage

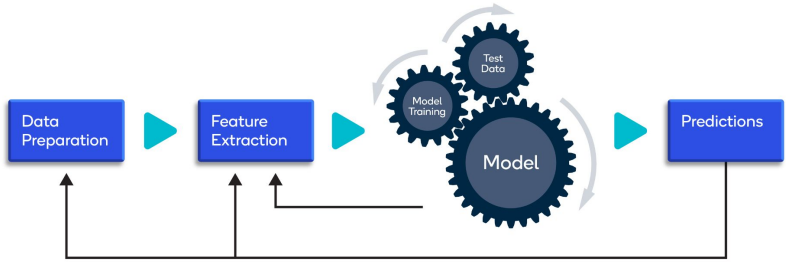
{"teamID":"wildfire","teamName":"Wildfire","wins":51,"losses":54,"scoresFor":2224,"scoresAgainst":2345,"gamesPlayed":105,"completionPercentage":"90.13","holdPercentage":"61.38","breakPercentage":"27.27","huckPercentage":"60.65","turnovers":2633,"blocks":1292,"redZonePercentage":"77.33"}

Weather Data Collection

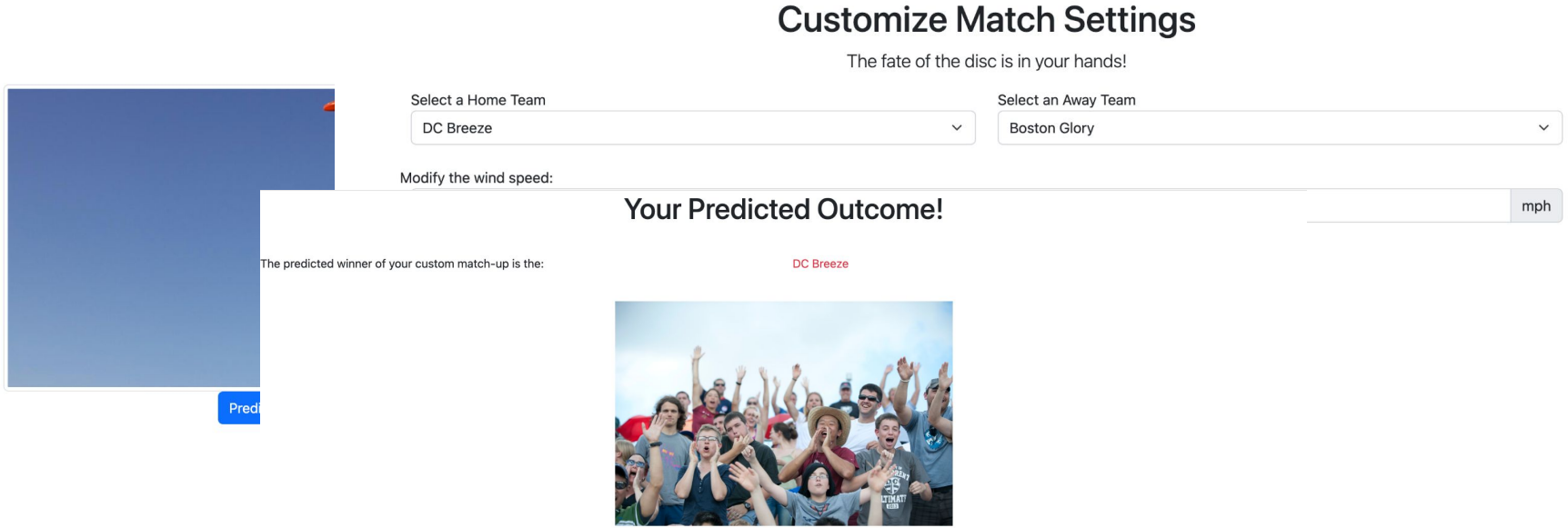
- Visual Crossing Weather API
  - 4 weather conditions
  - 15 minute intervals
  - Game averages
- Average Home Field Conditions
- Wind Speed SVM Integration

Structure of ML Algorithm

- Support Vector Machine using Scikit-learn Python library that trains data from our database to predict game outcomes
  - Train data consists of 2D arrays (games, characteristics) and 1D array (winner for each game)
  - Predict who will win based on the previous game characteristics
  - Training to fit the model and measure accurately



U.P.E. Today


Customize Match Settings
The fate of the disc is in your hands!
Select a Home Team
DC Breeze
Select an Away Team
Boston Glory
Modify the wind speed:
mph
Your Predicted Outcome!
The predicted winner of your custom match-up is the:
DC Breeze

Challenges Faced

- Neural Network vs Support Vector Machine
- Incorrect location values (Manually fixed)

Questions?