Project Description

Project title:

??

Core Dataset to be Utilized:

Player/ball tracking data which measures the location on the pitch of all 22 players as well as the ball at a rate of 25 times per second.

Industry Organization:

Professional Soccer team

"Goal" 😉:

Build pitch control models for a professional soccer team to enhance their ability to compute scoring opportunities and off ball opportunities.

Deliverables:
- User facing code/programs that allows for the easy extraction of key moments/opportunities in a game and identify areas for improvement, or areas of strength
  - This would include visualizations/reports that are team and/or player specific

Recent work on pitch control that code will drawn from:
http://www.sloansportsconference.com/wp-content/uploads/2018/02/2002.pdf

The "pitch control" code to be modified is heavy in mathematics and based on Baysian probabilistic theory. Previous works on pitch control can be found here:
https://github.com/Friends-of-Tracking-Data-FoTD/LaurieOnTracking

This work will need to be modified to accommodate a different data source.

Stretch Goal Options:

Use reinforcement learning to predict optimal passing pathways as a way to assess player decision making, assess opponent tactics, and provide coaching tools to improve tactics/player performance

Build a machine learning model utilizing the results of the pitch control model as features to predict match wins/losses or player goals/assists/takeaways etc.