Paper:

ForVizor: Visualizing Spatio-Temporal Team Formations in Soccer

**\* the concept**

Soccer is a sport in which the team formation matters the most. The game depends on how the players are actually positioned in the field. The formation could 4-2-2, 3-3-2 or could be 3-2-2-1. The formation choosing is the strategy for which the results of the game depends. This paper analyses the kinds of team formation the soccer game can have. Most of the visualization which has been dealt with this game is predominantly lower level information. That is the action of the player, movements, etc. But the higher-level information such as team formation is also important. This gives the spatial information which could help in analyzing the team strategy.

**\* the implementation**

The technique involved in this paper is to identify the initial formation of both the teams playing. Then as the game progresses, they take the aid of visual footage and determine the changes in team formation. This predominantly involves video tracking (for each player). The computer vision techniques particle filtering can be used for this purpose. This captures the relative distance covered by each player frame by frame. Then by using Least Square technique, they localized the positions in the spatial map which gives players movement.

**\*data characteristics**

It’s a spatial-temporal data designs for visualizing team formation. The tracked videos give the range of each player movement spatially. By tracking each player movement spatially, they segregated the region, subsequently identifying the team formation. I liked the idea of tracking each player in the video to make sure the region for the player is determined. This tool what they developed called ForVizor.

**\*conclusion**

I liked the idea of analyzing the video of the game, implement the player tracking, and use least square method to map the visualization. It’s an effective visualization for understating the tactics involved in the game. This is not just limited to soccer, any sports with team formation involved, such as, American football, Rugby, Cricket, can use this visualization for the understanding of the team formation.