Soccer Transfer Window

My class project will be centered on the soccer transfer window. I will propose to analyze the movement of soccer players from one team to another as well as the amount of money being spent between teams during the soccer transfer market across South America and Europe from July 27, 2020 – October 5, 2020. This is the time period I want to explore initially; however, I may go back to previous years to compare the spending. For instance, the spending during a pandemic will certainly be different from what teams spent in previous seasons. For instance, not as much money was spent during this time compared to in the past since players weren’t receiving the salary they desired, or players were conflicted whether to move to a new team let alone a new country during a pandemic.

The primary outcome of my project is to develop maps in python that display money and player movement taking place between soccer clubs that are in those two continents. Moreover, the source of my data will be from https://www.transfermarkt.co.uk/ and a repository from https://github.com/ewenme/transfers. From the data, I would input the team & player name, name of the country, and transfer fee. Besides, the data provides the purchases and player movement from soccer leagues such as the English Premier League, German Bundesliga, Spanish La Liga, and many others.

One challenge I have envisioned is writing a code of the conversion from euros to dollars since the main currency used in soccer is euros. Another encounter I have is missing data. I found data for Europe but have yet to find a reliable dataset for South America. In python, I plan to read CSV files and convert them into geopandas. Furthermore, Other python tools I will use are seaborn, pandas, NumPy, matplotlib, and shapely geometry to accomplish a plethora of geospatial operations.

The knowledge of spatial movement patterns in soccer gives teams insights in determining what players to acquire. For instance, teams use Qualitative Trajectory Calculus (QTC). QTC is a spatiotemporal qualitative calculus that describes the relative movement between objects. QTC recognizes spatial movement patterns that occur on different parts of the field and/or at different spatial scales. Likewise, analytics are too incorporated in selecting a player to obtain through sensing technologies that provide data streams for every match (QTC is one of them). It tracks spatial-temporal events like passes, shots, fouls, etc. that occur during each match. Team scouts use algorithms by exploiting a dataset of players’ performance. The feedback I received from my class was to look out for the Network X library in python in an upcoming lecture, observe pre vs post-COVID in the transfer market, and if distance doesn’t matter.