

NTDS Project Proposal: Analyzing Transfers in Football

Team Members:

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Terms Definition:

Transfer fees: The amount that a club pays another club in order to acquire one of their players.
Player Market Value (MV): The estimated amount in monetary terms at which the player's worth is valued at a certain period in time (usually the present).

Project Definition:

The transfers in world Football have become crazier over the last decade. Fees in the order of tens of Millions \$USD for a player transfer have become the norm in the elite football leagues.

In our project, we plan to analyze the patterns of transfers in the best leagues of the world. We want to highlight which clubs/countries are the most active on the transfer market, spend the most or makes the most profit out of transfers.

Plan:

We will collect the data by parsing the website: <https://www.transfermarkt.com/>

We will focus on the national leagues for which the total MV of the player exceeds **200M\$** (14 in Europe, 5 in Americas, 2 in Asia). We will collect data related to:

1. Players' profiles (name, birthday, nationality/national football team)
2. Clubs' metrics (players, MV of all its players, country/league)
3. Inter-club player transfers' metrics (transfer fees, transfer date...)

Once the data is gathered, we will build a graph using clubs as nodes and transfer as weighted directed edges.

Outcome:

We would ultimately want to identify:

1. Clusters between transfers: if certain number of clubs are more oriented to do the exchange between each other
2. Clusters between player origins and clubs: identify if certain clubs tends more toward acquiring players from specific nationalities
3. Evolution of graph hubs with respect to time
4. Plot player's MV change with respect to time
5. Display information retrieved on an interactive map