

ICM Network Problem

For this problem we have provided three data tables:

- 1) matches.csv
- 2) passingevents.csv
- 3) fullevents.csv

===== Data Descriptions =====

1) matches.csv

~~~~~

##### MatchID

A unique identifier for each match played during the season, and reflects the order of the match in the season.

##### OpponentID

A unique identifier for the opposing team played in the match. Note that the Huskies play each opposing team twice during the season.

##### Outcome

Result of the match, either 'win', 'loss', or 'tie'.

##### OwnScore

Number of goals scored by the Huskies.

##### OpponentScore

Number of goals scored by the Opposing Team.

##### Side

Whether the Huskies were the 'home' team or 'away' team.

##### CoachID

A unique identifier for the Huskies coach for this match.

#### 2) passingevents.csv

~~~~~

MatchID

A unique identifier for each match played during the season (see matches.csv).

TeamID

A unique identifier for the team involved in the pass (either 'Huskies' or OpponentID from matches.csv).

OriginPlayerID

A unique identifier for the Player at the origin of the pass. The PlayerID has the form "TeamID_PlayerPosition##" where 'TeamID' denotes the team on which the player plays and PlayerPosition reflects the player's position. Possible positions are: 'F':forward, 'D':defense, 'M':midfield, or 'G':goalkeeper

DestinationPlayerID

A unique identifier for the Player at the destination of the pass. (see OriginPlayerID)

MatchPeriod

The half in which the event took place. '1H': first half, '2H': second half

EventTime

The time in seconds during the MatchPeriod (1st or 2nd half) at which the event took place.

EventSubType

The type of pass made. Can be one of: 'Head pass', 'Simple pass', 'Launch', 'High pass', 'Hand pass', 'Smart pass', 'Cross'.

EventOrigin_x

The x-coordinate on the field at which the pass originated. The x-coordinate is in the range [0, 100] and is oriented from the perspective of the attacking team, where 0 indicates the team's own goal, and 100 indicates the opposing team's goal.

EventOrigin_y

The y-coordinate on the field at which the pass originated. The y-coordinate is in the range [0, 100] and is oriented from the perspective of the attacking team, where 0 indicates the team's left-hand side, and 100 indicates the team's right-hand side.

EventDestination_x

The x-coordinate on the field at the pass destination. (see EventOrigin_x)

EventDestination_y

The y-coordinate on the field at the pass destination. (see EventOrigin_y)

2) fullevents.csv

~~~~~

MatchID

A unique identifier for each match played during the season (see matches.csv).

TeamID

A unique identifier for the team involved in the pass (either 'Huskies' or OpponentID from matches.csv).

OriginPlayerID

A unique identifier for the Player initiating the event. The PlayerID has the form "TeamID\_PlayerPosition##" where 'TeamID' denotes the team on which the player plays and PlayerPosition reflects the player's position. Possible positions are: 'F':forward, 'D':defense, 'M':midfield, or 'G':goalkeeper

DestinationPlayerID

A unique identifier for the Player at the destination of the event. (see OriginPlayerID)

NOTE: Only valid for 'Pass' or 'Substitution' event types, otherwise

NaN.

MatchPeriod

The half in which the event took place. '1H': first half, '2H': second half

EventTime

The time in seconds during the MatchPeriod (1st or 2nd half) at which the event took place.

EventType

The type of the event. Can be one of: 'Free Kick', 'Duel', 'Pass', 'Others on the ball', 'Foul', 'Goalkeeper leaving line', 'Offside', 'Save attempt', 'Shot', 'Substitution', 'Interruption'

EventSubType

The subtype of the event. Can be one of: 'Goal kick', 'Air duel', 'Throw in', 'Head pass', 'Ground loose ball duel', 'Simple pass', 'Launch', 'High pass', 'Touch', 'Ground defending duel', 'Hand pass', 'Ground attacking duel', 'Foul', 'Free kick cross', 'Goalkeeper leaving line', '', 'Free Kick', 'Smart pass', 'Cross', 'Save attempt', 'Corner', 'Clearance', 'Shot', 'Acceleration', 'Reflexes', 'Substitution', 'Late card foul', 'Simulation', 'Free kick shot', 'Protest', 'Hand foul', 'Penalty', 'Violent Foul', 'Whistle', 'Out of game foul', 'Ball out of the field', 'Time lost foul'

EventOrigin\_x

The x-coordinate on the field at which the event originated. The x-coordinate is in the range [0, 100] and is oriented from the perspective of the attacking team, where 0 indicates the team's own goal, and 100 indicates the opposing team's goal.

EventOrigin\_y

The y-coordinate on the field at which the event originated. The y-coordinate is in the range [0, 100] and is oriented from the perspective of the attacking team, where 0 indicates the team's left-hand side, and 100 indicates the team's right-hand side.

EventDestination\_x

The x-coordinate on the field at the event destination. (see EventOrigin\_x)

EventDestination\_y

The y-coordinate on the field at the event destination. (see EventOrigin\_y)

NOTE: For 'Substitution' events, the Outgoing player is the OriginPlayerID, while in the incoming player is the DestinationPlayerID