ICM Network Problem

ICM网络问题

For this problem we have provided three data tables:

对于这个问题，我们提供了三个数据表：

1) matches.csv

1） 匹配.csv

2) passingevents.csv

2） 传递事件.csv

3) fullevents.csv

3） 完整事件.csv

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Data Descriptions

数据描述

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1) matches.csv

1） 匹配.csv

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MatchID

匹配ID

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

赛季中每场比赛的unqiue标识符，反映赛季中比赛的顺序。

OpponentID

对立面

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

比赛中对方球队的联合标识符。注意，哈士奇在赛季中会和对方各打两次。

Outcome

结果

Result of the match, eiter `win', `loss', or `tie'.

比赛结果，无论是“赢”、“输”还是“平”。

OwnScore

自有分数

Number of goals scored by the Huskies.

哈士奇队的进球数。

OpponentScore

对映体

Number of goals scored by the Opposing Team.

对方进球数。

Side

侧面

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

不管哈士奇队是主队还是客队。

CoachID

被辅导的

A unqiue identifier for the Huskies coach for this match.

这场比赛的哈士奇教练的unqiue标识符。

2) passingevents.csv

2） 传递事件.csv

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MatchID

匹配ID

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

赛季中每场比赛的unqiue标识符（参见matches.csv）。

TeamID

团队ID

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

参与传球的球队的unqiue标识符（Huskies或matches.csv中的OpponentID）。

OriginPlayerID

原始剧本

A unqiue 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

在传球起点处球员的一个unqiue标识符。PlayerID的格式为“TeamID\_player position####”，其中“TeamID”表示球员在其上踢球的球队，PlayerPosition反映球员的位置。可能的位置是：“F”：前锋，“D”：防守，“M”：中场，或“G”：守门员

DestinationPlayerID

目标玩家ID

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

在传球目的地的球员的一个unqiue标识符。（见原文）

MatchPeriod

配对期

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

事件发生的那一半1分：上半场，2分：下半场

EventTime

事件时间

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

比赛期间（上半场或下半场）发生事件的时间（秒）。

EventSubType

事件子类型

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

传球的类型。可以是“头传球”、“简单传球”、“发射”、“高传球”、“手传球”、“聪明传球”、“交叉传球”之一。

EventOrigin\_x

事件起源

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 oppositing team's goal.

传递开始的字段上的x坐标。x坐标在[0，100]范围内，从进攻队的角度来定位，0表示球队自己的目标，100表示对方的目标。

EventOrigin\_y

事件起源

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.

传递开始的字段上的y坐标。y坐标在[0，100]范围内，从进攻队的角度定位，其中0表示球队的左手边，100表示球队的右手边。

EventDestination\_x

事件目的地

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

传递目标处字段上的x坐标。（见事件起源）

EventDestination\_y

事件目的地

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

传递目的地字段上的y坐标。（见事件起源）

2) fullevents.csv

2） 完整事件.csv

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MatchID

匹配ID

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

赛季中每场比赛的unqiue标识符（参见matches.csv）。

TeamID

团队ID

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

参与传球的球队的unqiue标识符（Huskies或matches.csv中的OpponentID）。

OriginPlayerID

原始剧本

A unqiue 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

发起事件的玩家的unqiue标识符。PlayerID的格式为“TeamID\_player position####”，其中“TeamID”表示球员在其上踢球的球队，PlayerPosition反映球员的位置。可能的位置是：“F”：前锋，“D”：防守，“M”：中场，或“G”：守门员

DestinationPlayerID

目标玩家ID

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

事件目的地的播放机的unqiue标识符。（见原文）

NOTE: Only valid for 'Pass' or 'Subsition' event types, otherwise NaN.

注意：仅对“Pass”或“Subsition”事件类型有效，否则为NaN。

MatchPeriod

配对期

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

事件发生的那一半1分：上半场，2分：下半场

EventTime

事件时间

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

比赛期间（上半场或下半场）发生事件的时间（秒）。

EventType

事件类型

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'

事件的类型。可以是：“任意球”、“决斗”、“传球”、“球上其他人”、“犯规”、“守门员底线”、“越位”、“扑救尝试”、“射门”、“替换”、“中断”

EventSubType

事件子类型

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'

事件的子类型。可以是其中之一：“球门踢”、“空中决斗”、“掷界外球”、“头球传球”、“地面散球决斗”、“简单传球”、“发射”、“高传球”、“触球”、“地面防守决斗”、“手传球”、“地面进攻决斗”、“犯规”、“任意球传中”、“守门员离场线”、“任意球”、“聪明传球”、“传中”、“扑救尝试”、“角球”、“净空”、“射门”，‘加速’、‘反身’、‘替补’、‘迟卡犯规’、‘模拟’、‘任意球投篮’、‘抗议’、‘手犯规’、‘罚球’、‘暴力犯规’、‘哨声’、‘场外犯规’、‘球出场’、‘时间损失犯规’

EventOrigin\_x

事件起源

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 oppositing team's goal.

事件发生时字段上的x坐标。x坐标在[0，100]范围内，从进攻队的角度来定位，0表示球队自己的目标，100表示对方的目标。

EventOrigin\_y

事件起源

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.

事件发生时字段上的y坐标。y坐标在[0，100]范围内，从进攻队的角度定位，其中0表示球队的左手边，100表示球队的右手边。

EventDestination\_x

事件目的地

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

事件目的地字段上的x坐标。（见事件起源）

EventDestination\_y

事件目的地

The y-coordinate on the field at the event

活动现场的y坐标