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**Machine Learning**

**Dataset**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Name** | **No of players** | **Performance rating** | **Experience** | **Win/Lose** |
| 1 | Browns | 14 | 8.5 | 5 | 1 |
| 2 | Bills | 13 | 9 | 2 | 1 |
| 3 | Chargers | 14 | 8.5 | 3 | 0 |
| 4 | Avengers | 12 | 8 | 4 | 0 |
| 5 | Jango | 15 | 8 | 5 | 1 |

**Attribute Description**

1. ID - ID of the team
2. Name - Team Name
3. No of players - No of players in a team
4. Performance rating - Rating of each team out of 10
5. Experience - Years of experience for the team
6. Win/Lose - (0 or 1)If win 1 and lose 0

If there is a team with following attributes :

No of players = 14

Performance rating = 8

Experience = 3

We will try to predict whether they win or lose by using KNN classifier. We are choosing 3 neighbours here.

|  |  |  |  |
| --- | --- | --- | --- |
| **No of players** | **Performance rating** | **Experience** | **Square distance** |
| 14 | 8.5 | 5 | 0+.25+4 = 4.25 |
| 13 | 9 | 2 | 1+1+1 = 3 |
| 14 | 8.5 | 3 | 0+.25+0 = .25 |
| 12 | 8 | 4 | 4+0+1=5 |
| 15 | 8 | 5 | 1+0+4=5 |

So the 3 nearest neighbours are :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Name** | **No of players** | **Performance rating** | **Experience** | **Win/Lose** |
| 1 | Browns | 14 | 8.5 | 5 | 1 |
| 2 | Bills | 13 | 9 | 2 | 1 |
| 3 | Chargers | 14 | 8.5 | 3 | 0 |

And here we have 2 teams with win and 1 team with lose.So by using KNN classifier, we can predict that the given team has the chance to win.