

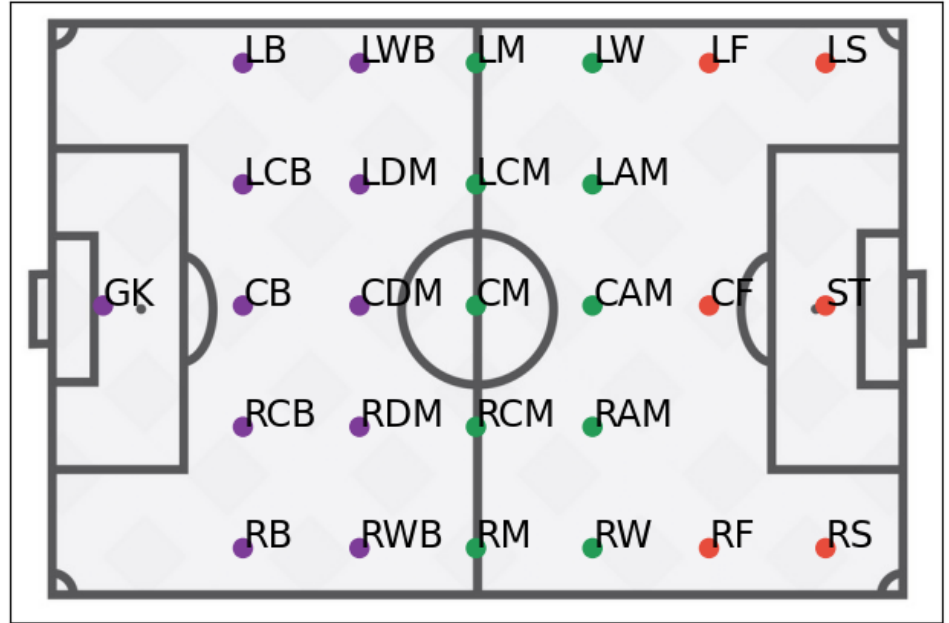
Put on your General Manager Cap: Analyzing FIFA Player Data

ECE 143 WI 2021 Group 26
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Background

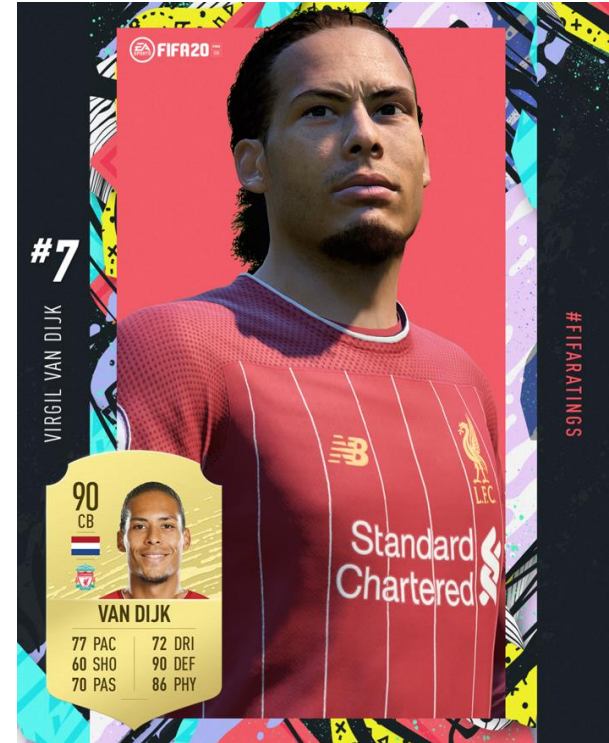
- ▶ Goals of Soccer
- ▶ Clubs
- ▶ Players
- ▶ Positions



Background of Data

- ▶ 25 Producers & 400 outside data contributors
- ▶ 6,000 Data Reviewers worldwide
- ▶ Thorough data verification process
- ▶ Players: >30 specific attributes
 - ▶ Overall rating: Pace, Shooting, Passing, Dribbling, Defending, and Physical

▶ Source: <https://www.goal.com/en-ae/news/fifa-player-ratings-explained-how-are-the-card-number-stats/1hszd2fgr7wgf1n2b2yjdpgynu>



Dataset Display



Shape: (18207, 89)

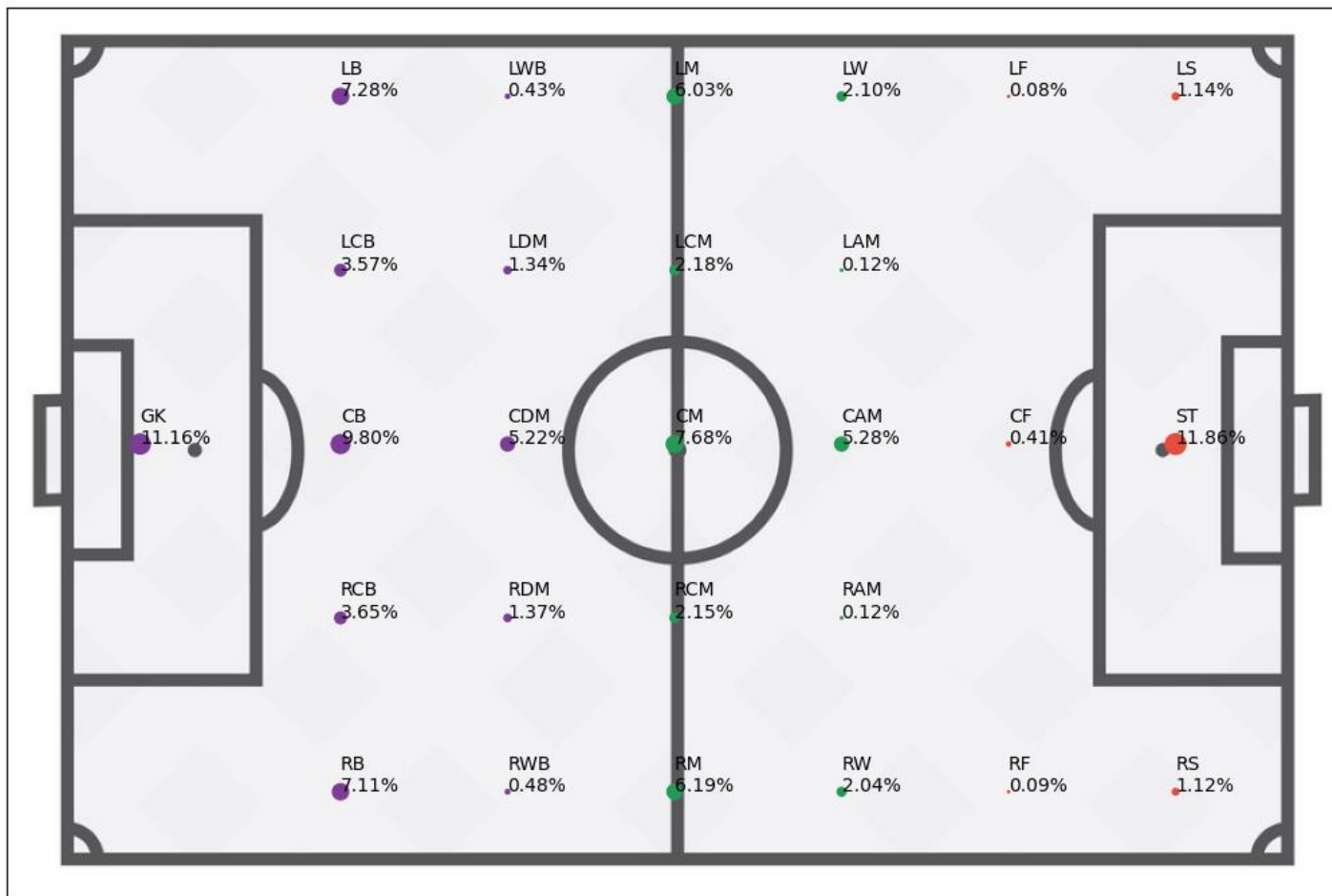
ID	Name	Age	Nationality	Overall	Potential	Club	Value	Wage	Special	Preferred Foot	International Reputation	Weak Foot	Skill Moves	Work Rate	Body Type	Real Face
158023	L. Messi	31	Argentina	94	94	FC Barcelona	€110.5M	€565K	2202	Left	5.0	4.0	4.0	Medium/Medium	Messi	Yes
20801	Cristiano Ronaldo	33	Portugal	94	94	Juventus	€77M	€405K	2228	Right	5.0	4.0	5.0	High/Low	C. Ronaldo	Yes
190871	Neymar Jr	26	Brazil	92	93	Paris Saint-Germain	€118.5M	€290K	2143	Right	5.0	5.0	5.0	High/Medium	Neymar	Yes
193080	De Gea	27	Spain	91	93	Manchester United	€72M	€260K	1471	Right	4.0	3.0	1.0	Medium/Medium	Lean	Yes
192985	K. De Bruyne	27	Belgium	91	92	Manchester City	€102M	€355K	2281	Right	4.0	5.0	4.0	High/High	Normal	Yes

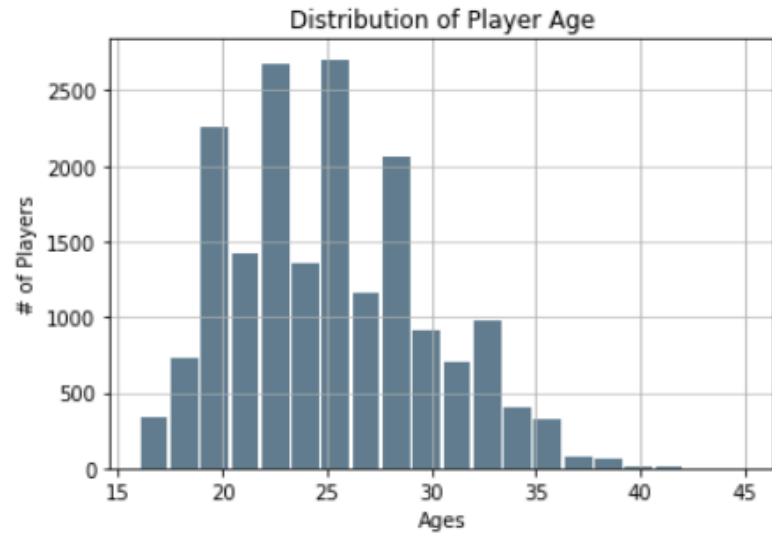
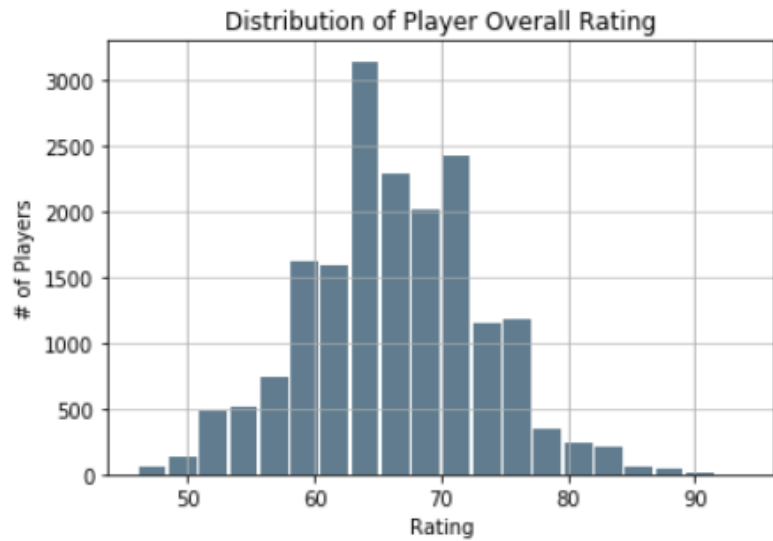
Data Preparation

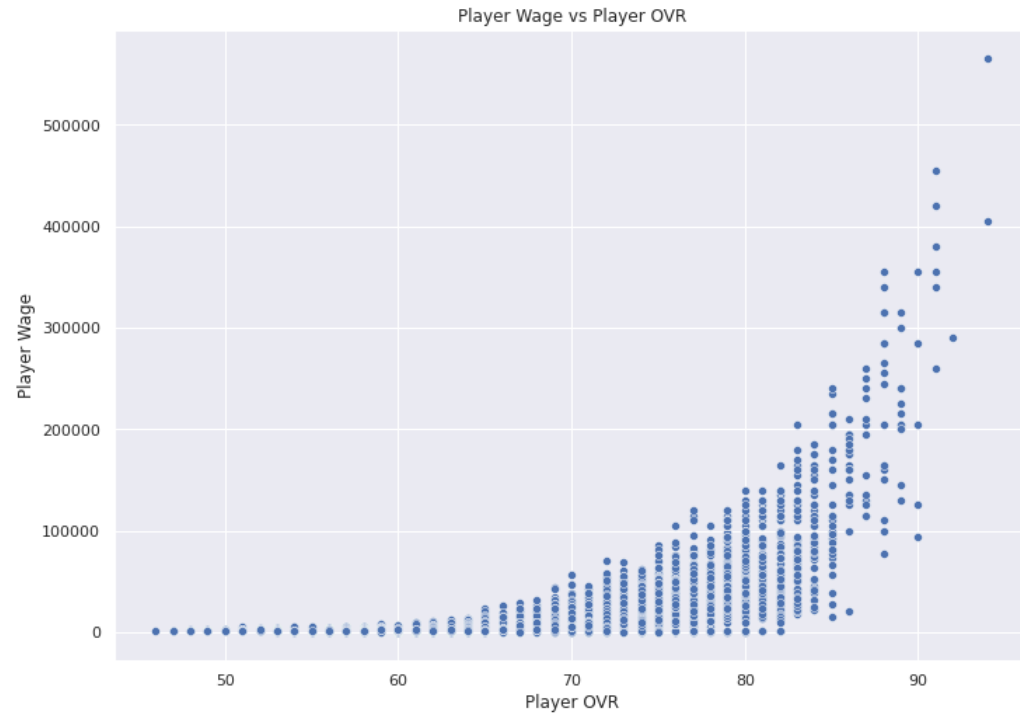
- ▶ Removing URLs
 - ▶ Dead links
- ▶ Formatting
 - ▶ Wage/Value/Release Clause
- ▶ Skill Attributes
 - ▶ Crossing, Dribbling, Ball Control, Agility, Balance

Exploratory Data Analysis









Scenario-Based Data Analysis



What playstyles do each team reflect strongly?



Which players are best fit for a given team?



Scenario 1

- ▶ Long Passing, FC Barcelona
- ▶ [ST, LB, RB, CB]



L. Messi | Overall-94 | Pos-ST | Wage- €565



Piqué | Overall-87 | Pos-CB | Wage- €240



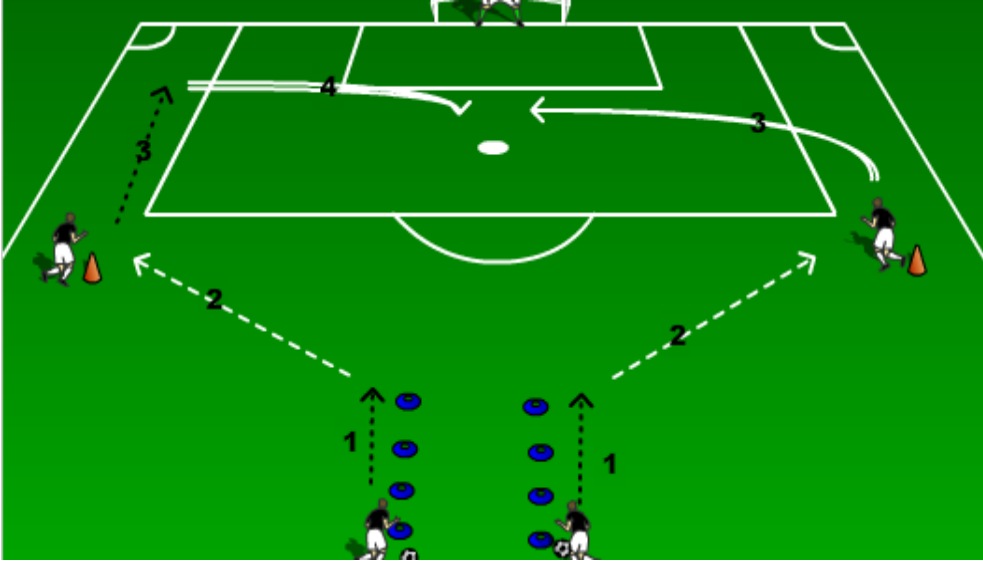
Jordi Alba | Overall-87 | Pos-LB | Wage- €250



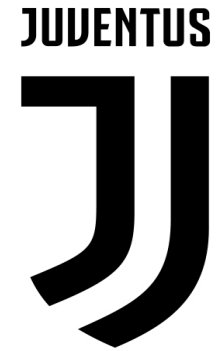
S. Umtiti | Overall-87 | Pos-RB | Wage- €205



Scenario 2

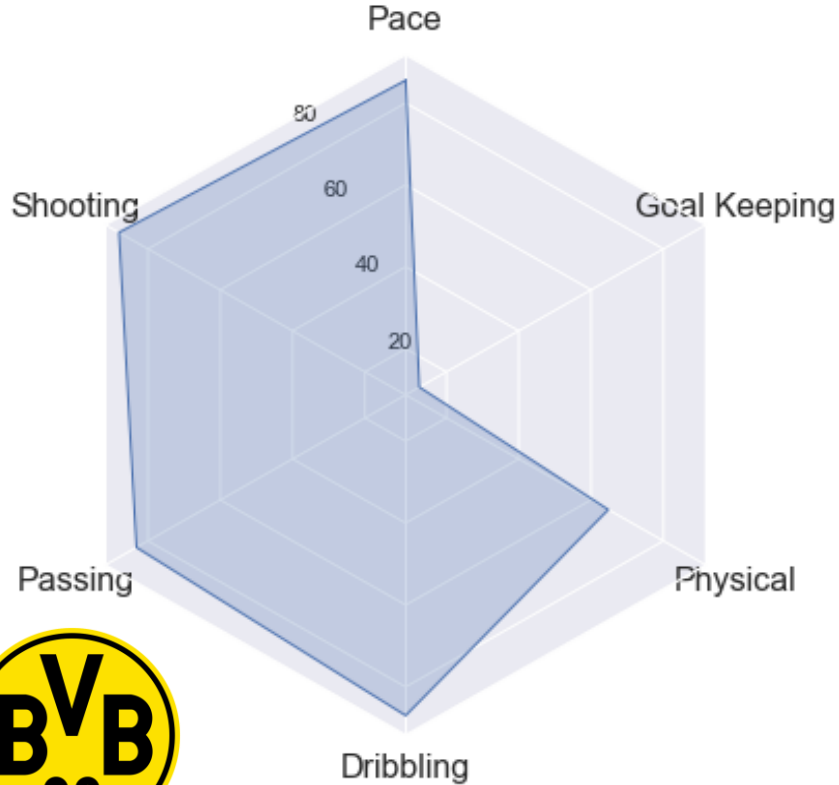


↓ Crossing, Juventus
[ST, LM, RM, LW, RW]



ST, LW, RW are good enough, need LM and RM

M. Reus | Overall-86 | Pos-LM | Wage- €100



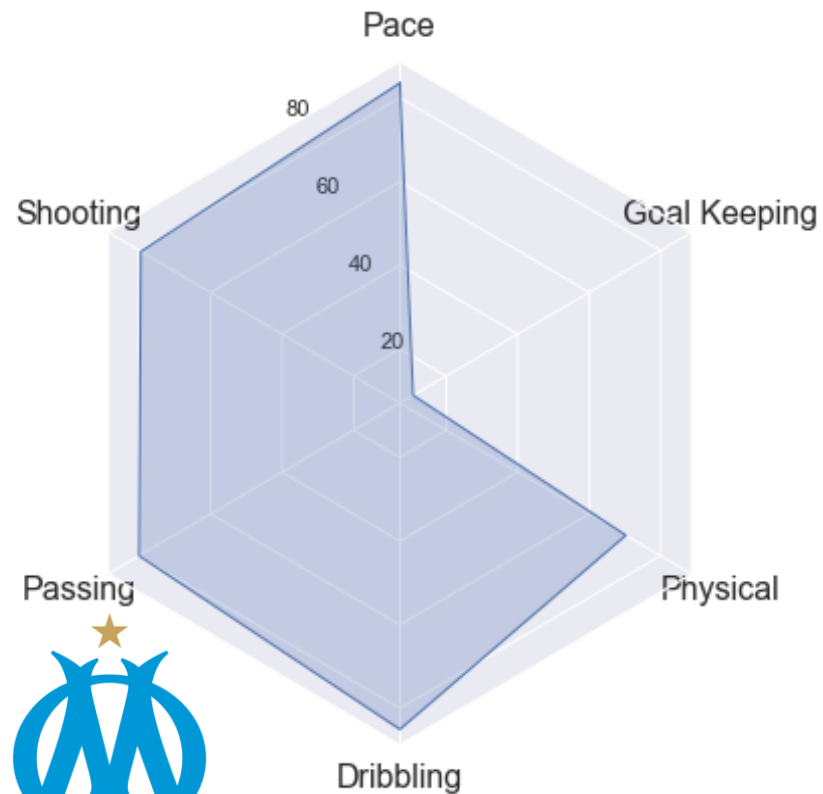
Koke | Overall-85 | Pos-LM | Wage- €88



K. Mbappé | Overall-88 | Pos-RM | Wage- €100

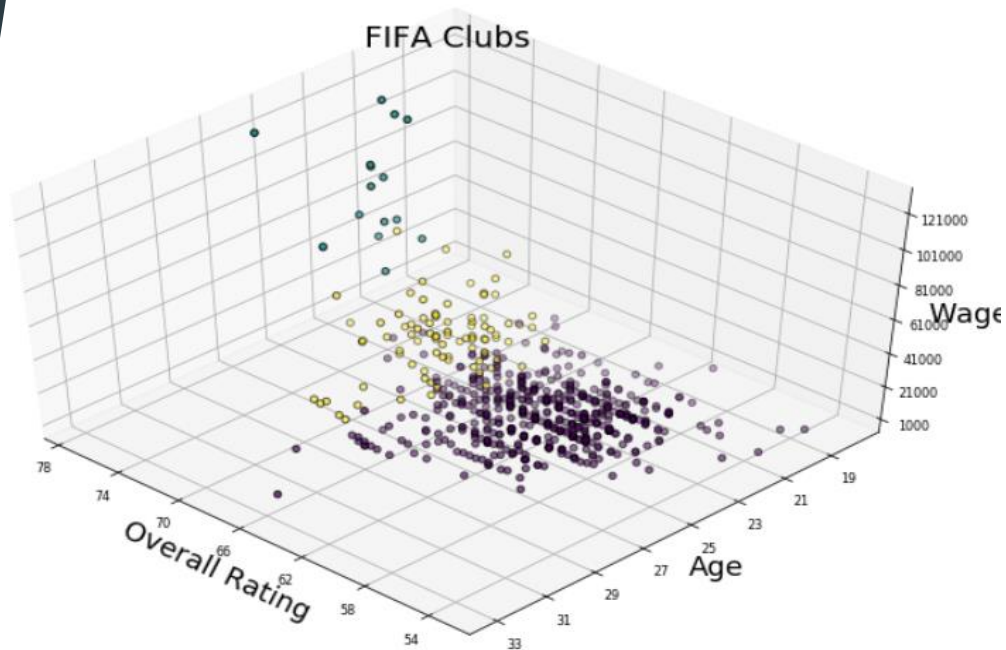


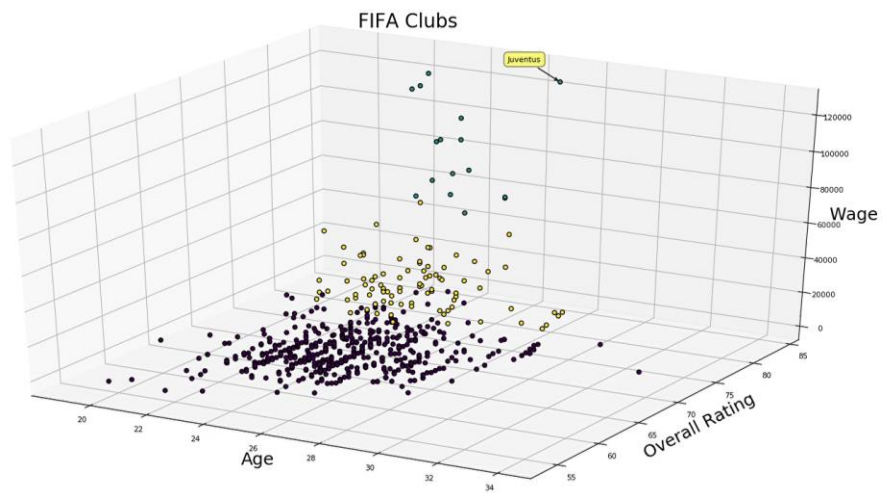
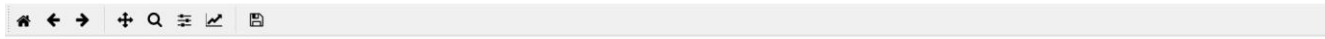
F. Thauvin | Overall-84 | Pos-RM | Wage- €72



ML Model - Team Clustering

- ▶ What kind of team to play?
- ▶ 3 Clusters
 - ▶ Championship Contenders
 - ▶ Middle of the Pack
 - ▶ Developmental Rosters





x=36.5916 , y=88.0961 , z=101441

- ▶ FIFA dataset is comprehensive
- ▶ More data comes out every year (2k)
 - ▶ Player rating comparison to real life
 - ▶ Contract movement over years

Takeaways

A soccer player in a Juventus jersey is celebrating on a stadium field at night. He is wearing a white long-sleeved jersey with black vertical stripes, featuring the Adidas logo, the Juventus crest, and the Jeep sponsor. He has his mouth open in a shout and his fists are clenched. The background shows the stadium lights and a large Juventus logo on a wall.

Thank you!

Any Questions?