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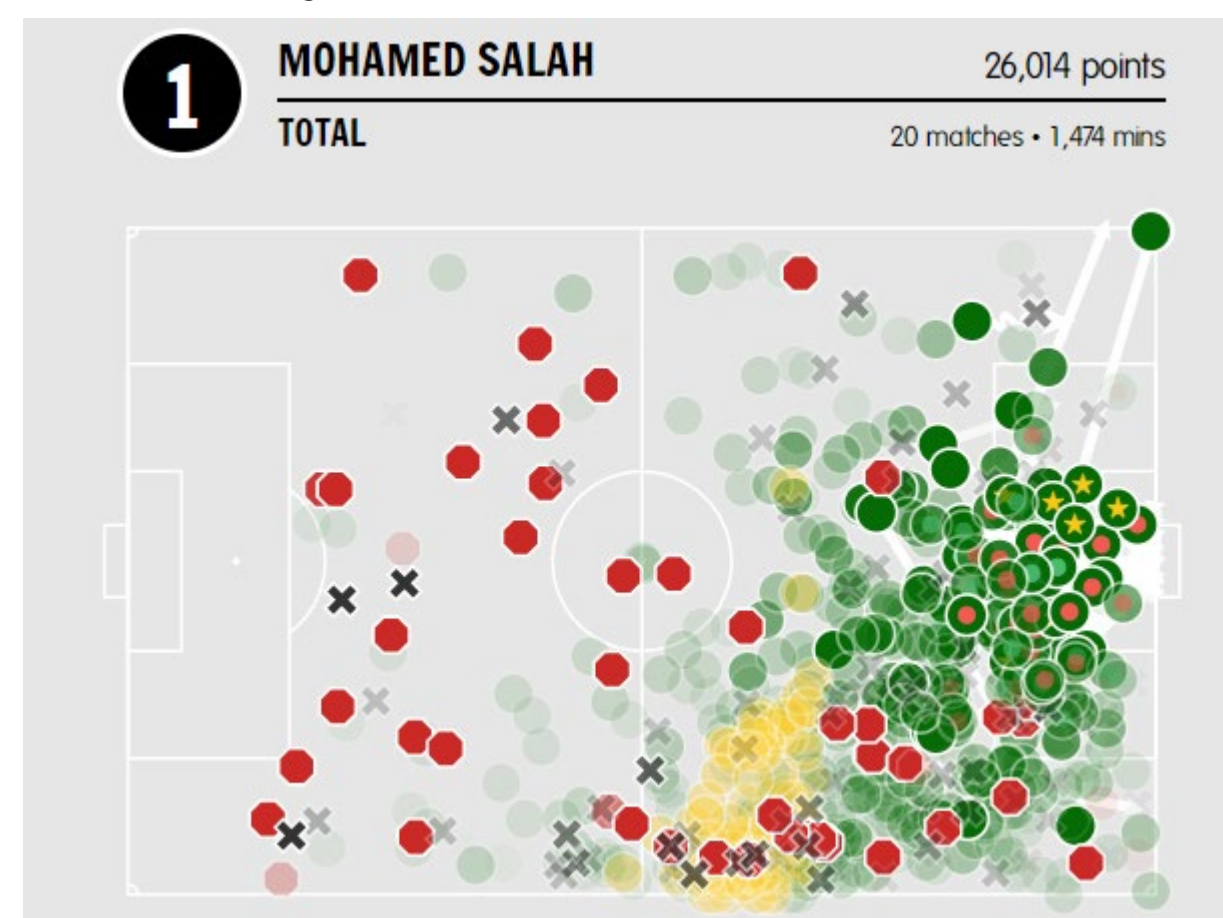
Statistical and Visualization Methods on Evaluating Players in Football

PROJECT AIM

- Developing scientific and effective models on evaluating football players' performance
- Calculating player ratings against all the players playing the same position in different leagues
- Visualizing players' performance as a readable scouting report

DATA

Nowadays, many companies, such as Opta and Wyscout, are collecting the data of every event happening on football field. Football data are full-detailed and accurate now, even beyond the need.



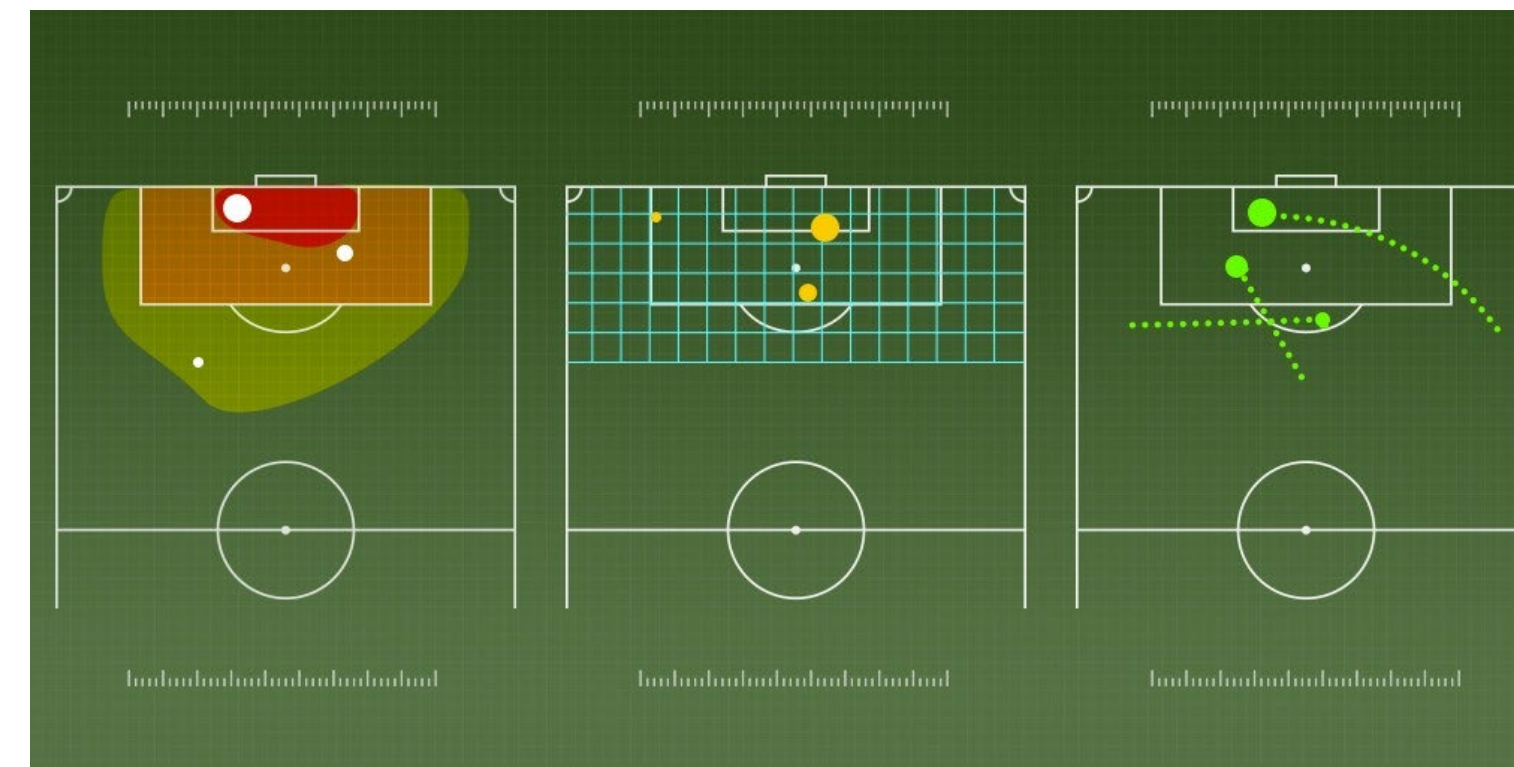
It is important to introduce models on sorting out and analyzing the data we need for scouting player, and visualize the result in user-friendly way, for football industry practitioners to use.

After comparison, data from Wyscout are used in the project

MODELING

Expected Goals (xG)

A predictive model used to assess every goal-scoring chance, and the likelihood of scoring, based on the position (x, y) of each shot. Other parameters, such as head/foot and strong/weak, are also considered

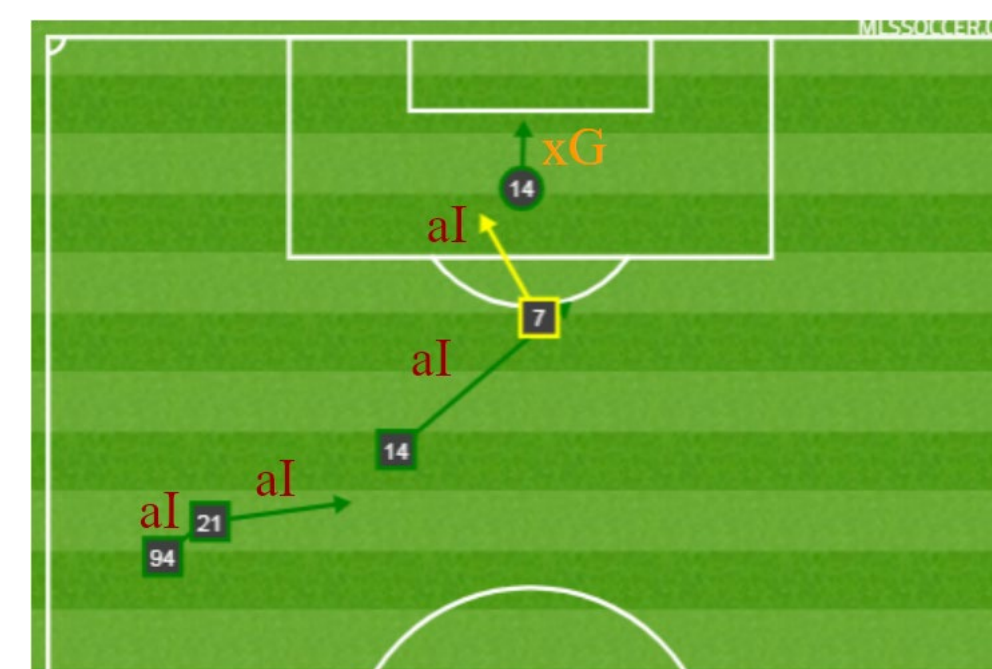


Attack Impact

A model to assess every attack event, i.e. pass, dribble, freekick, corner and throw-in, based on the position and other parameters

xG Chain

Contribution of each attack event in a possession chain, which lead to a shot



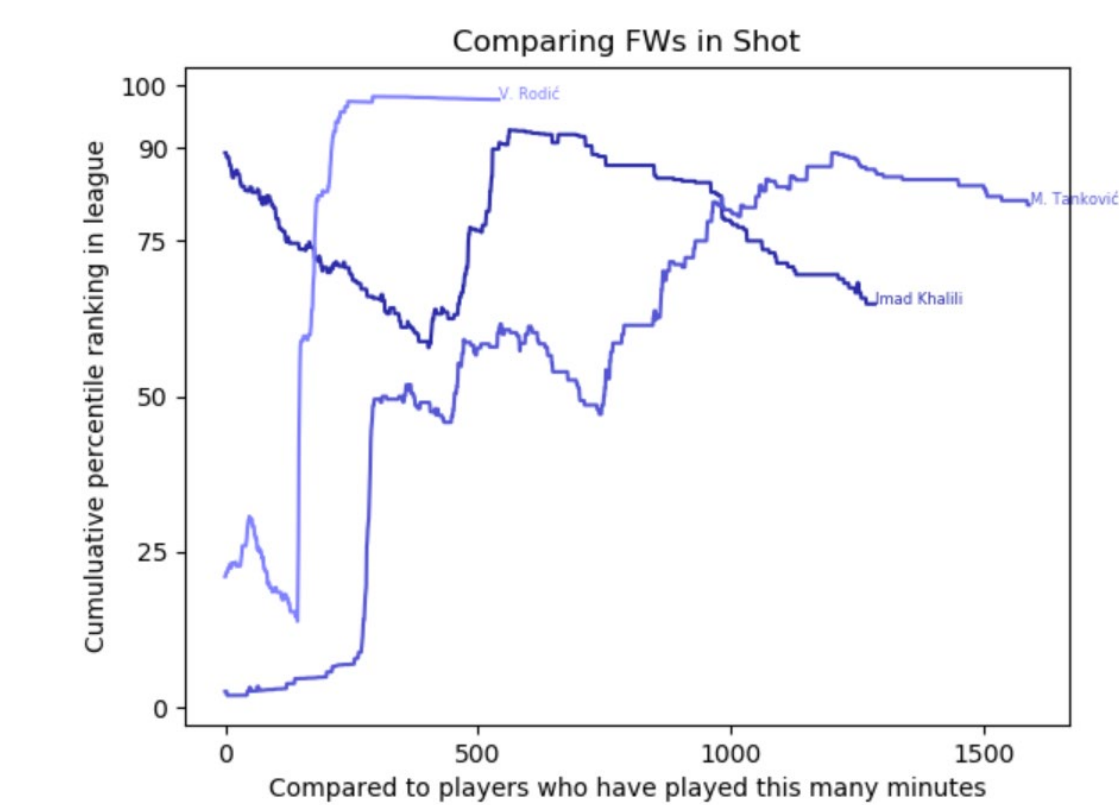
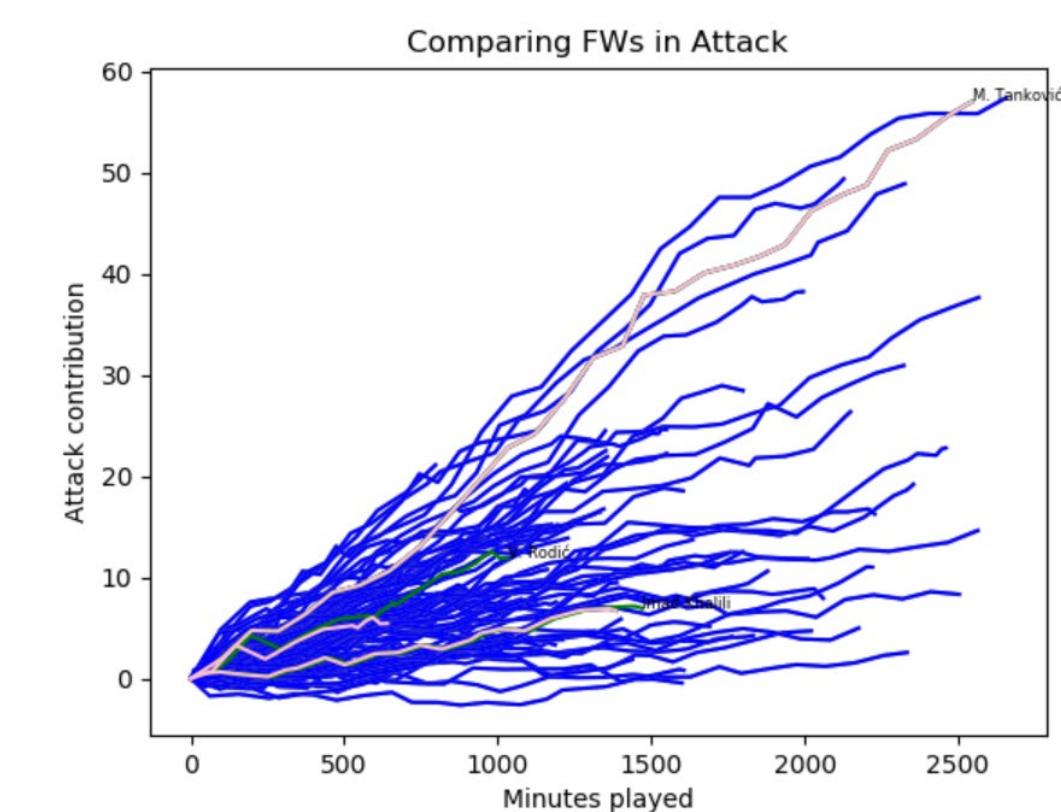
$$xGC = \frac{al}{\sum al} \cdot xG$$

Defensive Impact

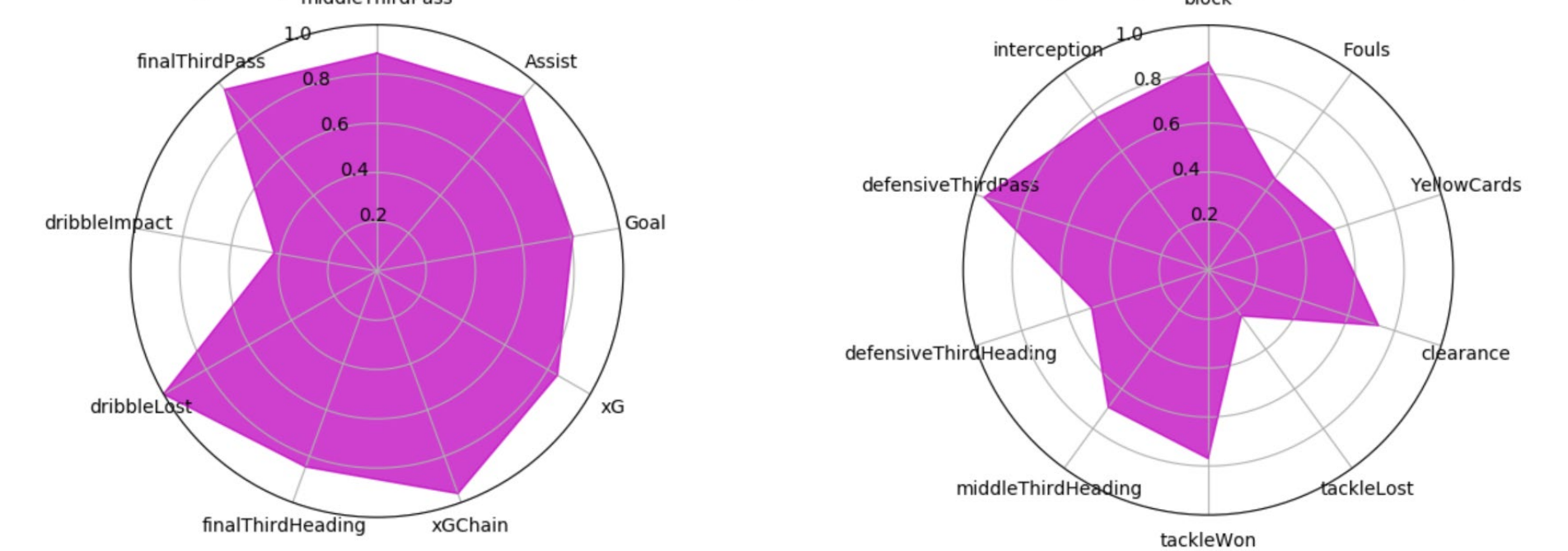
Same as attack impact, while assessing defensive events such as tackle, clearance, interception and block

RESULTS

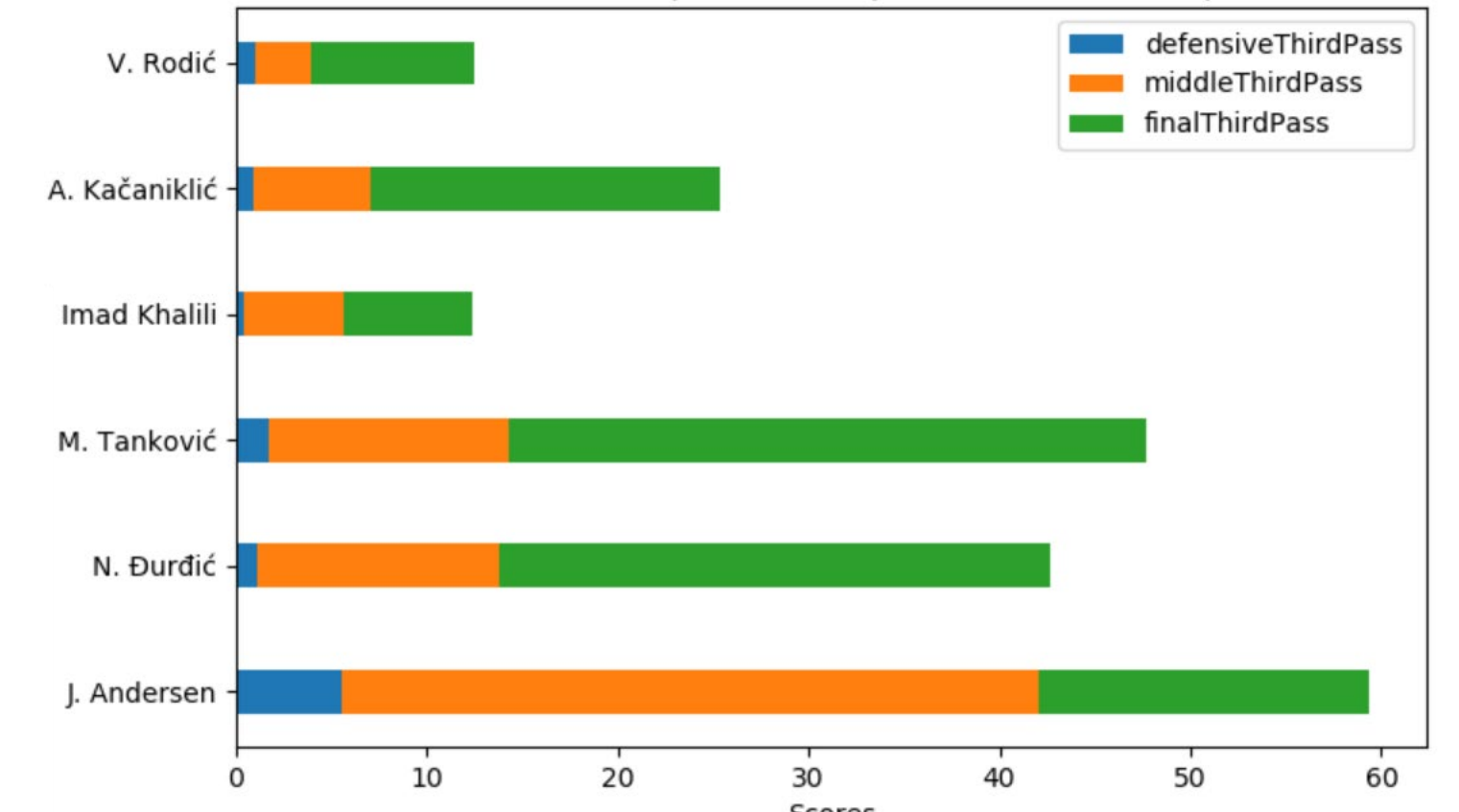
Sample figures on scouting a football player, Muamer Tanković



Attack Ranking compared with FW and AM (2546 min) Defensive Ranking compared with FW and AM (2546 min)



Contribution of passes impact in different parts



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Project in
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