

Capstone One Presentation

Date: 4/30/20



With a goal of finding top fantasy picks for a fantasy hockey league, used descriptive and inferential statistics to determine top 20 picks for Centers, Left Wingers, Right Wingers, and Defenders as well as some potential underrated picks for each position.

- Looking at data from 2010 - 2019, we have a number of players that have since retired, so will not be considered for potential fantasy picks for the coming season.

- Fantasy Points are calculated as:

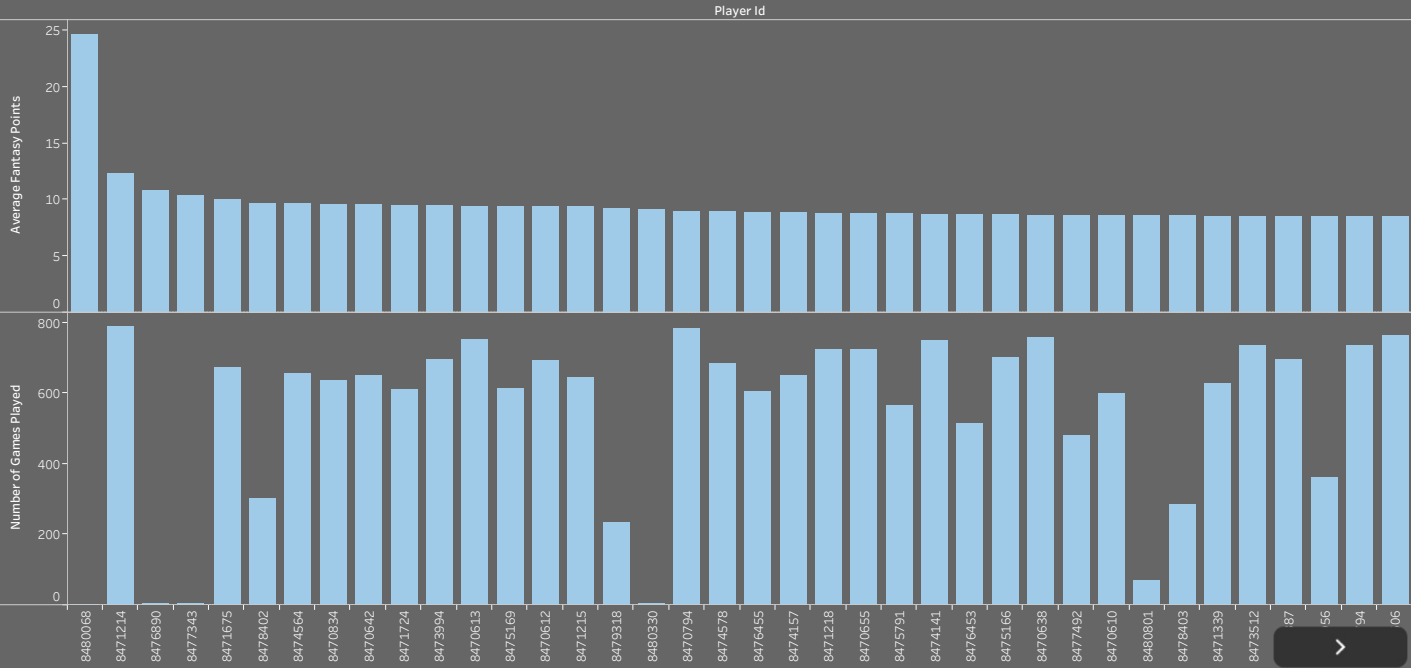
Fantasy Points = (Goals x 6.0) + (Assists x 4.0) + (Shots x 0.9) + Blocks + Hits + Plus/Minus

- Using statistical methods, was able to find and recommend 20 top picks for each position, as well as 3 sleepers per position.



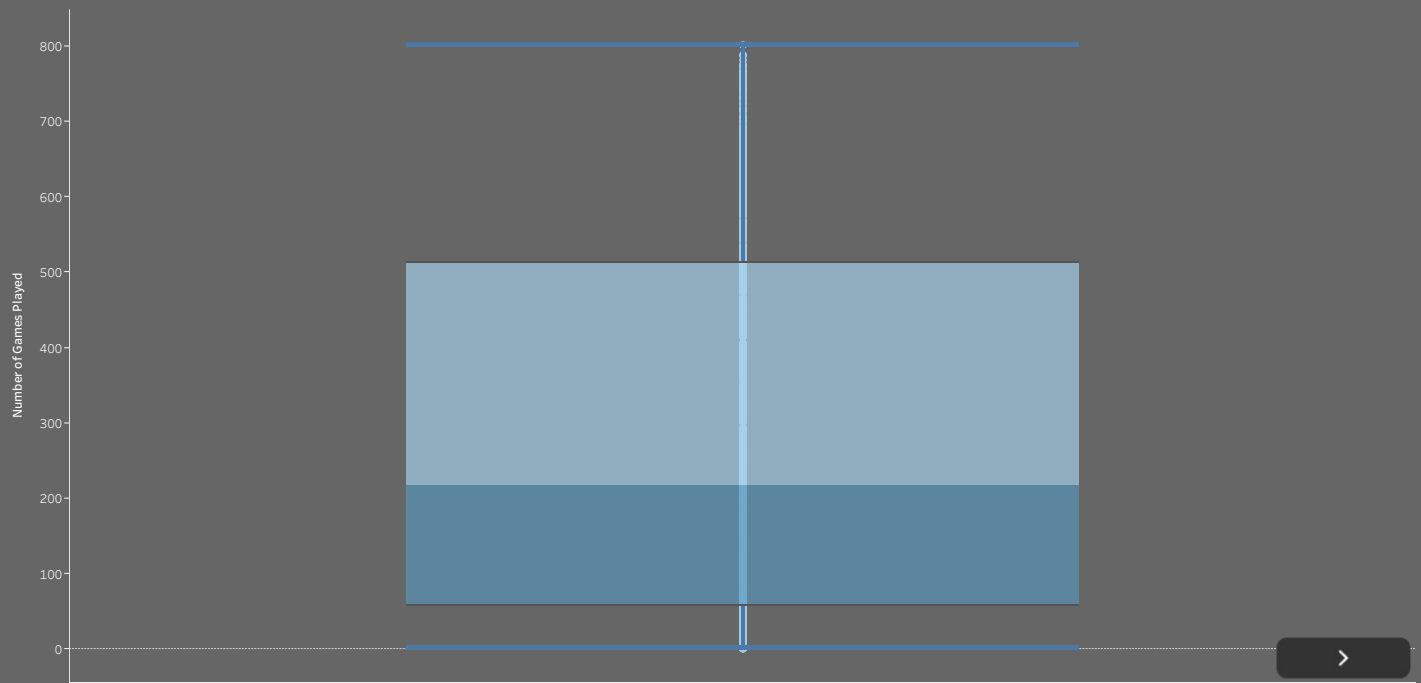
Looking at average fantasy points and number of games played, we see that there are some top player ID's with minimal games played, which may not be reliable picks for fantasy.

Average Fantasy Points and Number of Games Played per Player



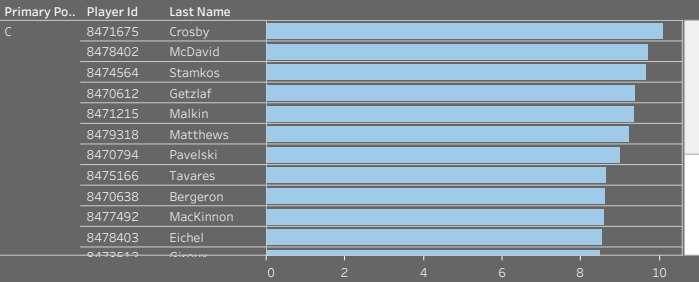
To find a cutoff for number of games played, used descriptive statistic to look at the number of games played across all active players, leading to a decision of 58 games.

Boxplot of Number of Games Played Across All Players

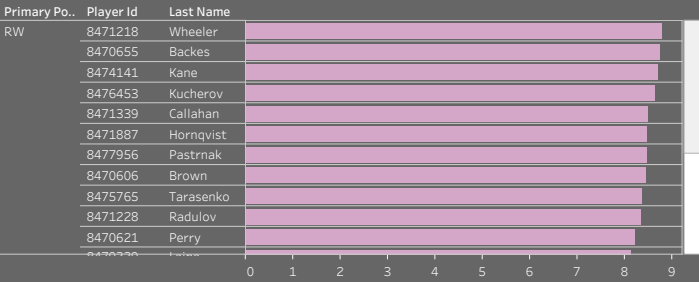


Using descriptive statistics we can observe the top 20 picks for each position based on average fantasy points.

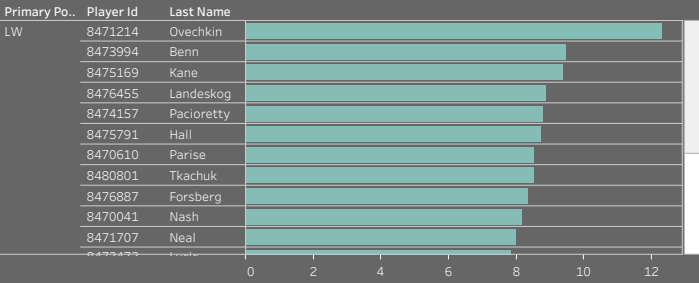
Top 20 Active Centers by Average Fantasy Points (Number of games played >= 58)



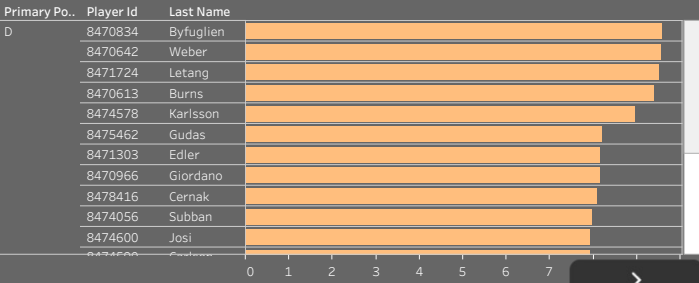
Top 20 Active Right Wings by Average Fantasy Points (Number of games played >= 58)



Top 20 Active Left Wings by Average Fantasy Points (Number of games played >= 58)



Top 20 Active Defenders by Average Fantasy Points (Number of games played >= 58)



To find potential underrated picks, wanted to find which variables contributes the most to fantasy points and how weighted they are, surprisingly giving shots as the highest, followed by goals and assists.



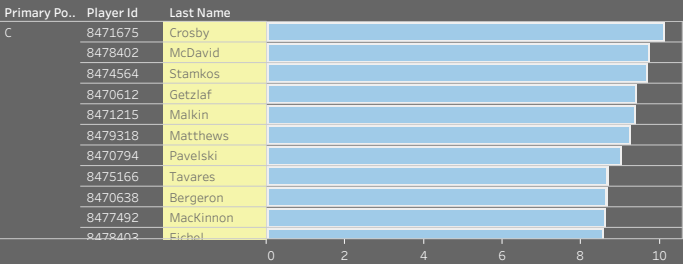
Correlation of Average Variables to Average Fantasy Points

Player Id	Corr Avg Shots, Avg FP	Corr Avg Goals, Avg FP	Corr Avg Assists, Avg FP	Corr Avg PlusMinus, Avg FP	Corr Avg Hits, Avg FP	Corr Avg Blocks, Avg FP
8446485	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8448208	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8449645	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8450725	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8455919	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8456283	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8457063	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8457981	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458361	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458520	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458525	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458529	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458537	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458541	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458543	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458590	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458637	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458938	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458943	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8458951	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459004	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459053	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459424	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459427	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459429	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459442	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459444	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459454	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459457	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459461	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875
8459462	0.7330	0.6878	0.6651	0.4396	0.3084	0.2875

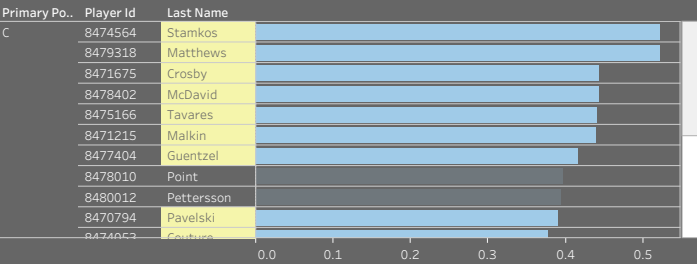


Diving deeper into the Center position, applying the findings from earlier shows players that have high averages in the highly correlated variables that aren't in the top 20 picks.

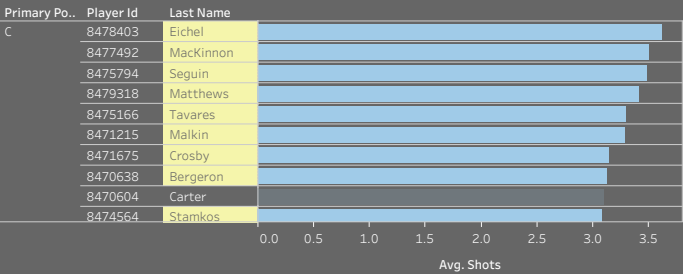
Top 20 Active Centers by Average Fantasy Points (Number of games played >= 58)



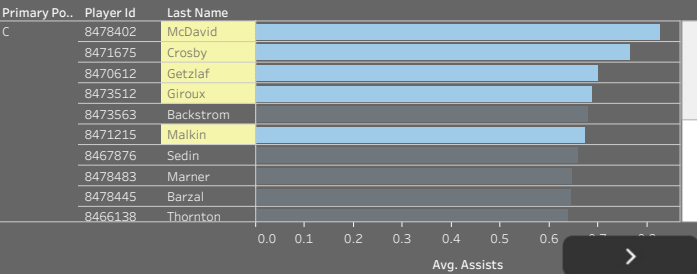
Top 20 Active Centers by Average Goals Scored (Number of games played >= 58)



Top 20 Active Centers by Average Shots (Number of games played >= 58)

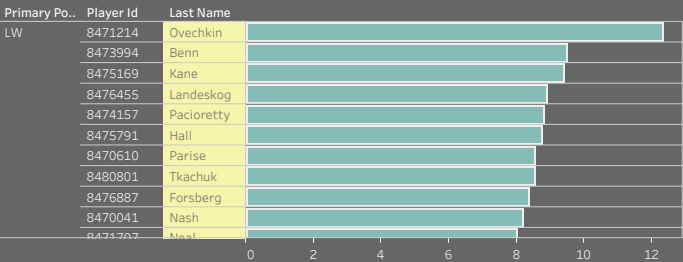


Top 20 Active Centers by Average Assists (Number of games played >= 58)

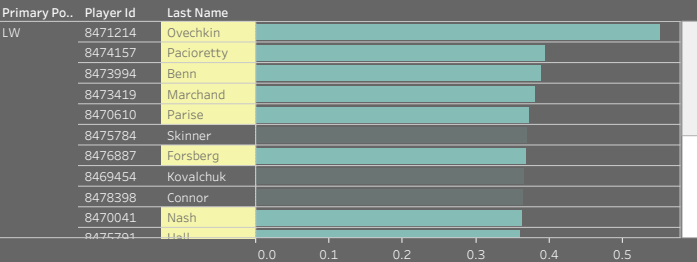


Continuing the application from before gives us the results for Left Wing players as well, giving potential underrated picks.

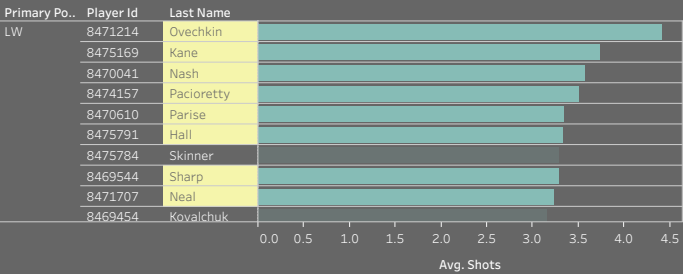
Top 20 Active Left Wings by Average Fantasy Points (Number of games played >= 58)



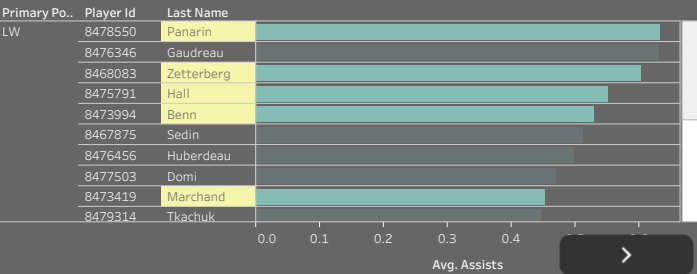
Top 20 Active Left Wings by Average Goals Scored (Number of games played >= 58)



Top 20 Active Left Wings by Average Shots (Number of games played >= 58)

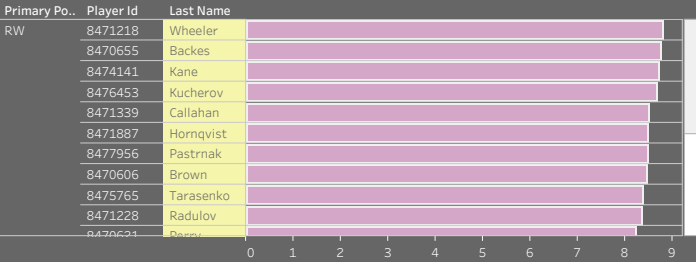


Top 20 Active Left Wings by Average Assists (Number of games played >= 58)

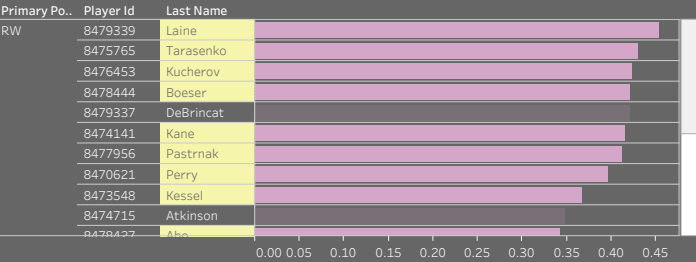


We can do the same, looking at Average Shots, Average Goals, and Average Assists for Right Wingers to reveal some picks.

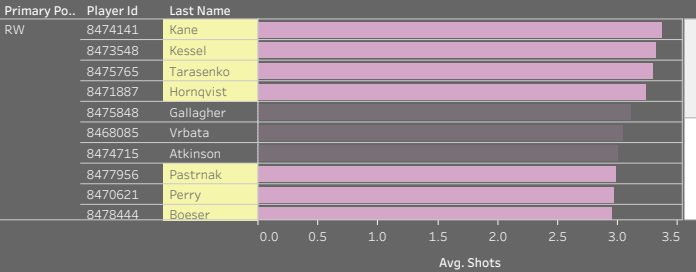
Top 20 Active Right Wings by Average Fantasy Points (Number of games played >= 58)



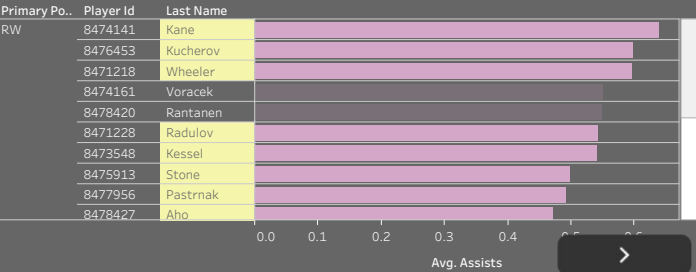
Top 20 Active Right Wings by Average Goals Scored (Number of games played >= 58)



Top 20 Active Right Wings by Average Shots (Number of games played >= 58)

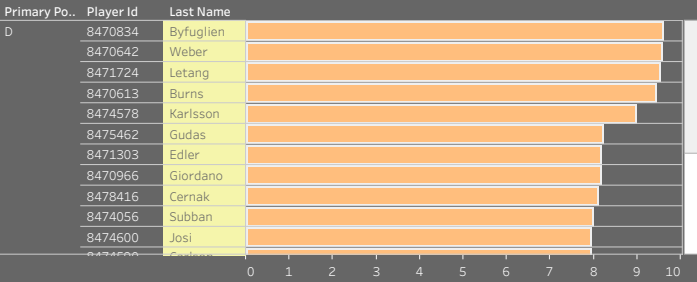


Top 20 Active Right Wings by Average Assists (Number of games played >= 58)

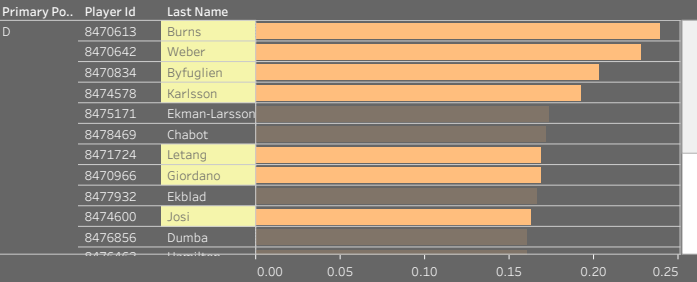


Lastly, looking at the average variables for defenders gives us the final underrated picks for the fantasy draft.

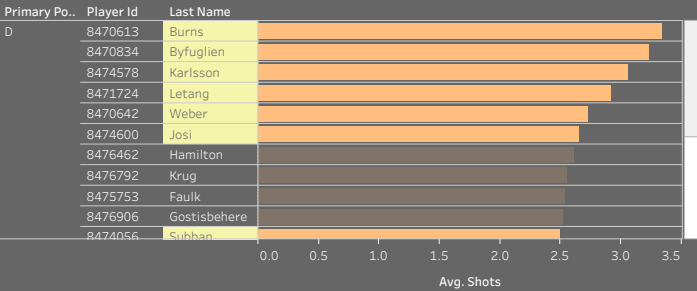
Top 20 Active Defenders by Average Fantasy Points (Number of games played >= 58)



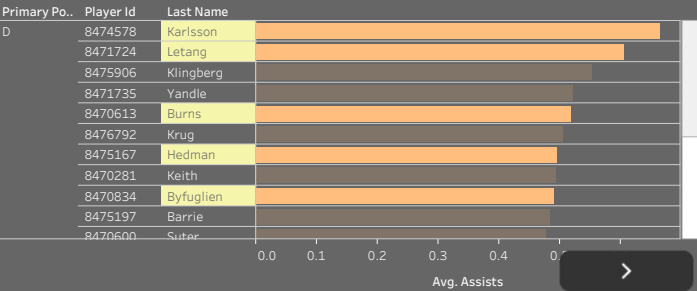
Top 20 Active Defenders by Average Goals Scored (Number of games played >= 58)



Top 20 Active Defenders by Average Shots (Number of games played >= 58)



Top 20 Active Defenders by Average Assists (Number of games played >= 58)



Using statistical methods, we are able to recommend 20 top picks for each position as well as some underrated picks for each position.

Looking back at the [Top 20 Positions](#) dashboard slide will give the list of 20 names per position, which can be used as a reference during the next season fantasy draft.

[Go to - Top 20 Positions](#)

From our weighted measures, some notable underrated for each position include:

[Center](#)- Carter, Pettersson, Toews

[Left Wing](#) - Skinner, Kovalchuk, van Riemsdyk

[Right Wing](#) - Gallagher, Atkinson, Rantanen

[Defender](#) - Hamilton, Krug, Ekblad