

New York Mets

Midseason Talent Acquisition Strategy Appendix

Prepared for Don Wedding, GM August 21, 2018

New York Mets Analytics

Alexander Booth, Justin Benson, Noah Lieberman, Michael Pallante, Thomas Popeck Spiller

Table of Contents

Statistics & Terminology	2
Data Sources Chart	4
Logistic Results	5
Random Forest Results	
Gradient Boosting Results	
Mets' Prospect Tables	
Mariners' Prospect Tables	
References	
Code	

Statistics & Terminology

The Baseball Cube Statistics Glossary (Traditional Batting Statistics)

http://www.thebaseballcube.com/about/stats_glossary.asp

MLB Advanced Statistics Glossary (Advanced Batting Statistics)

http://m.mlb.com/glossary/advanced-stats

Key Advanced Batting Statistics:

• Wins Above Replacement (WAR): "WAR measures a player's value in all facets of the game by deciphering how many more wins he's worth than a replacement-level player at his same position (e.g., a Minor League replacement or a readily available fill-in free agent).

For example, if a shortstop and a first baseman offer the same overall production (on offense, defense and the basepaths), the shortstop will have a better WAR because his position sees a lower level of production from replacement-level players" (MLB Advanced Media).

• Weighted On-base Average (WOBA): "wOBA is a version of on-base percentage that accounts for how a player reached base -- instead of simply considering whether a player reached base. The value for each method of reaching base is determined by how much that event is worth in relation to projected runs scored (example: a double is worth more than a single).

For instance: In 2014, a home run was worth 2.101 times on base, while a walk was worth 0.69 times on base. So a player who went 1-for-4 with a home run and a walk would have a wOBA of .558 -- (2.101 + 0.69 / 5 PAs)" (MLB Advanced Media).

• Weighted Runs Created Plus (wRC+): "wRC+ takes the statistic Runs Created and adjusts that number to account for important external factors -- like ballpark or era. It's adjusted, so a wRC+ of 100 is league average and 150 would be 50 percent above league average.

For example, a player who plays his home games at hitter-friendly Coors Field will have a lower wRC+ than a player who posts identical stats at pitcher-friendly O.co Coliseum. The production of the player at Coors Field is deemed less impressive because of his ballpark's hitter-friendly nature" (MLB Advanced Media).

- On-Base Plus Slugging Plus (OPS+): "OPS+ takes a player's on-base plus slugging percentage and normalizes the number across the entire league. It accounts for external factors like ballparks. It then adjusts so a score of 100 is league average, and 150 is 50 percent better than the league average.
 - For example, Miguel Cabrera's .895 OPS in 2014 was 50 percent better than the MLB average after being adjusted for league and park factors. As a result, his OPS+ was 150" (MLB Advanced Media).
- Weighted Runs Above Average (wRAA): "wRAA measures how many runs a hitter contributes, compared with an average player -- so a player with a 0 wRAA would be considered league average, offensively. It's calculated by finding the difference in the number of runs contributed between a player and the league average (which is determined by the league average wOBA).

Because wRAA uses wOBA to determine how many runs a player is worth, a player with an above-average wOBA will have an above-average wRAA. But -- unlike wOBA -- wRAA is a counting stat. As a result, players with a higher number of plate appearances can accrue a higher wRAA than an equal player with fewer plate appearances" (MLB Advanced Media).

Data Sources Chart

NYM Analytics Data Sources:

Source Name	Description	Location	Acquisition
Fangraphs	Minor League Player batting and pitching data from 2006- Current	https://www.fangraphs.co m/minorleaders.aspx	Download
Baseball Reference	Minor League Player batting and pitching data from 1977 - 2017	https://www.baseball-ref erence.com/register/	Web scraping
The Baseball Cube	Major League Data Player batting, fielding and pitching data from 1865 - 2017 & Minor League batting and pitching data from 1977- 2017	http://www.thebaseballcu be.com	Download
Lahmans' MLB Database	Major League Data Player batting, fielding and pitching data from 1865 - 2017	http://www.seanlahman.c om/baseball-archive/stati stics/	Download
The Baseball Prospectus	Scouting reports for recent prospects	https://legacy.baseballpro spectus.com/prospects/ey ewitness.php	Web scraping
Sentiment Analysis - word list	List of words implying positive/negative sentiment analysis, will be augmented to include "baseball terms"	https://www.cs.uic.edu/~l iub/FBS/sentiment-analy sis.html	Download

Primary Data Source

Logistic Results

The following tables show the coefficients from select logistic Made.it models. The remaining levels are available in txt format.

	Carrott	R	ookie Lo	gistic Results		
			Dep	endent variable:		
			MLB	Career >= 3 Years		
Rk_Avg_AB	0.3***	(0.1)		Rk_Avg_PA	0.3***	(0.1)
Rk_Avg_AB_HR	0	(0.0)		Rk_Avg_R	-0.1	(0.1)
Rk_Avg_Age	-0.1***	(0.0)		Rk_Avg_RBI	0.4***	(0.2)
Rk_Avg_BABIP	0.4	(0.7)		Rk_Avg_SB	-0.2	(0.6)
Rk_Avg_Bavg	0.3	(1.1)		Rk_Avg_SecA	0.8**	(0.4)
Rk_Avg_BB	0.5*	(0.2)		Rk_Avg_SF	1.5	(1.0)
Rk_Avg_BBpct	5.3**	(2.3)		Rk_Avg_SH	-42.4	(2,197.4)
Rk_Avg_CS	0.3	(1.4)		Rk_Avg_SLG	0.1	(0.3)
Rk_Avg_Dbl	-0.7	(0.5)		Rk_Avg_SO	-0.3***	(0.1)
Rk_Avg_G	-0.01**	(0.0)		Rk_Avg_SOpct	-28.5	(661.7)
Rk_Avg_GDP	0.2	(1.1)		Rk_Avg_TB	0.1	(0.1)
Rk_Avg_H	0.6***	(0.1)		Rk_Avg_teams	-0.4*	(0.2)
Rk_Avg_HBP	0.5	(0.7)		Rk_Avg_Tpl	-39	(1,295.8)
Rk_Avg_HR	0.5	(1.3)		Rk_Avg_wOBA	3.0***	(0.9)
Rk_Avg_IBB	-41.7	(3,642.1)		Rk_Avg_wRAA	0.01***	(0.0)
Rk_Avg_ISO	-2.7***	(0.9)		Rk_Avg_XBH	-0.004	(0.1)
Rk_Avg_K_BB	-0.2***	(0.0)		Rk_Avg_XBHpct	0.4***	(0.1)
Rk_Avg_OPS	0.1	(0.1)		Constant	1.1	(2.9)
Rk_Avg_orgs	-3	(2.9)				
			Note:	*p<0.1;	**p<0.05;	***p<0.01



A- Logistic Results

Dependent variable:

MLB Career >= 3 Years

				570	
Rk_Avg_AB	0.2	(0.2)	Low_A_Avg_AB_HR	0.001	(0.0)
Rk_Avg_AB_HR	0.001	(0.0)	Low_A_Avg_Age	-0.5***	(0.0)
Rk_Avg_Age	0.2***	(0.0)	Low_A_Avg_BABIP	-23	(1,111.2)
Rk_Avg_BABIP	-2.6	(1.6)	Low_A_Avg_Bavg	17.7	(5,846.1)
Rk_Avg_Bavg	5.9***	(2.3)	Low_A_Avg_BB	0.3	(0.4)
Rk_Avg_BB	-0.3	(0.4)	Low_A_Avg_BBpct	3.1	(5,896.4)
Rk_Avg_BBpct	-41.6	(6,712.2)	Low_A_Avg_CS	6.6**	(3.1)
Rk_Avg_CS	-1.1	(2.1)	Low_A_Avg_Dbl	-6.4***	(1.8)
Rk_Avg_Dbl	1.8**	(0.8)	Low_A_Avg_G	-0.004	(0.0)
Rk_Avg_G	-0.01**	(0.0)	Low_A_Avg_GDP	-0.8	(2.0)
Rk_Avg_GDP	-0.5	(1.8)	Low_A_Avg_H	0.4***	(0.1)
Rk_Avg_H	-0.1	(0.2)	Low_A_Avg_HBP	-2.2	(2.5)
Rk_Avg_HBP	-1.1	(1.3)	Low_A_Avg_HR	-6.7***	(2.1)
Rk_Avg_HR	0.6	(1.8)	Low_A_Avg_HRpct	-23.7	(4,321.7)
Rk_Avg_IBB	-39.8	(8,193.2)	Low_A_Avg_IBB	-31.8	(7,912.4)
Rk_Avg_ISO	-8.3**	(4.1)	Low_A_Avg_ISO	3.6*	(1.9)
Rk_Avg_K_BB	-0.1**	(0.1)	Low_A_Avg_K_BB	-0.2***	(0.0)
Rk_Avg_OPS	-0.1	(0.3)	Low_A_Avg_OBP	-24.3	(5,581.4)
Rk_Avg_orgs	-40.2	(1,613.0)	Low_A_Avg_OPS	0.2	(0.2)
Rk_Avg_PA	0.2	(0.2)	Low_A_Avg_orgs	-10.2	(2,287.6)
Rk_Avg_R	0.1	(0.2)	Low_A_Avg_PA	0.5***	(0.1)
Rk_Avg_RBI	0.5*	(0.3)	Low_A_Avg_R	0.4	(0.3)
Rk_Avg_SB	0.4	(0.9)	Low_A_Avg_RBI	0.6**	(0.3)
Rk_Avg_SecA	1.0*	(0.6)	Low_A_Avg_SB	-0.4	(1.0)
Rk_Avg_SF	-1.4	(1.4)	Low_A_Avg_SecA	-0.04	(0.8)
Rk_Avg_SH	-25.7	(4,077.3)	Low_A_Avg_SF	-11.1	(3,956.2)
Rk_Avg_SLG	-0.3	(0.5)	Low_A_Avg_SH	-26	(4,027.5)
Rk_Avg_SO	-0.2	(0.2)	Low_A_Avg_SLG	1.3**	(0.7)
Rk_Avg_SOpct	-31.3	(1,775.3)	Low_A_Avg_SO	-0.4***	(0.1)
Rk_Avg_TB	-0.1	(0.2)	Low_A_Avg_SOpct	-27.1	(1,028.4)
Rk_Avg_teams	-0.1	(0.5)	Low_A_Avg_TB	0.3**	(0.1)
Rk_Avg_Tpl	-44.3	(4,256.5)	Low_A_Avg_teams	-14	(1,962.3)
Rk_Avg_wOBA	8.1**	(4.1)	Low_A_Avg_Tpl	-1.9	(2.2)
Rk_Avg_wRAA	0.01	(0.0)	Low_A_Avg_wOBA	0	(2.2)
Rk_Avg_XBH	0.1	(0.3)	Low_A_Avg_wRAA	0.02***	(0.0)
Rk_Avg_XBHpct	0.05	(0.2)	Low_A_Avg_XBH	-0.1	(0.2)
M_Rk_Avg_AB	-34.7	(1,613.0)	Low_A_Avg_XBHpct	0.05	(0.1)
Low_A_Avg_AB	0.3***	(0.1)	Constant	64.5	(1,996.0)

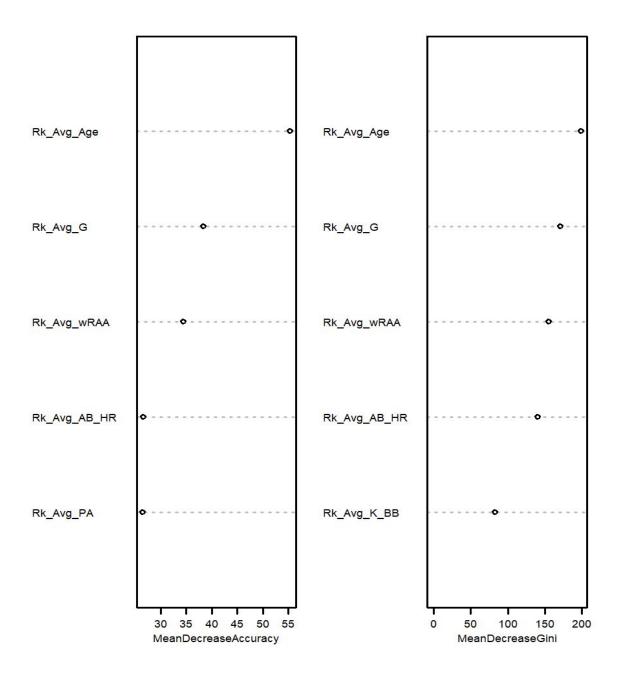
Note:

*p<0.1; **p<0.05; ***p<0.01

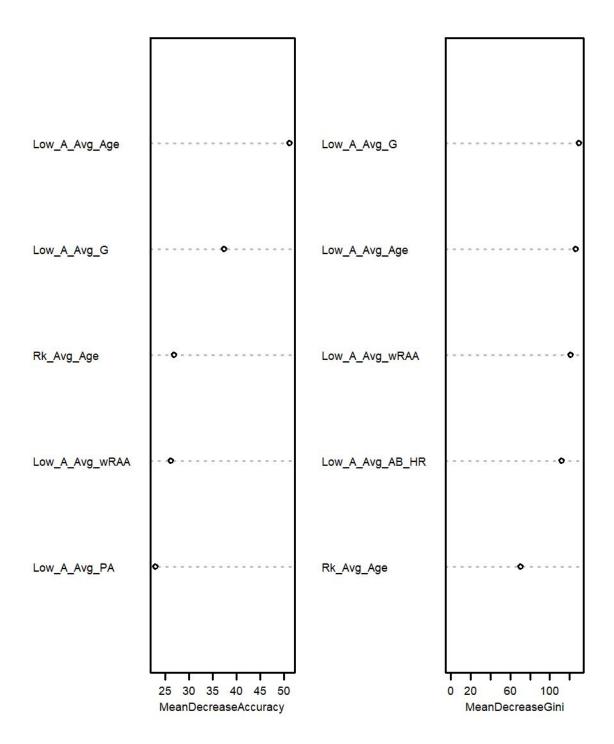
Random Forest Results

Below are the top 5 variables by importance, from the Random Forest model selected for the Made.it model.

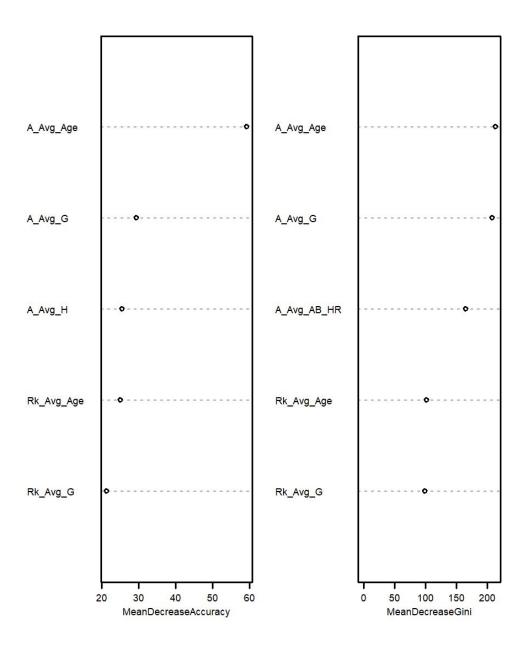
Rookie League:



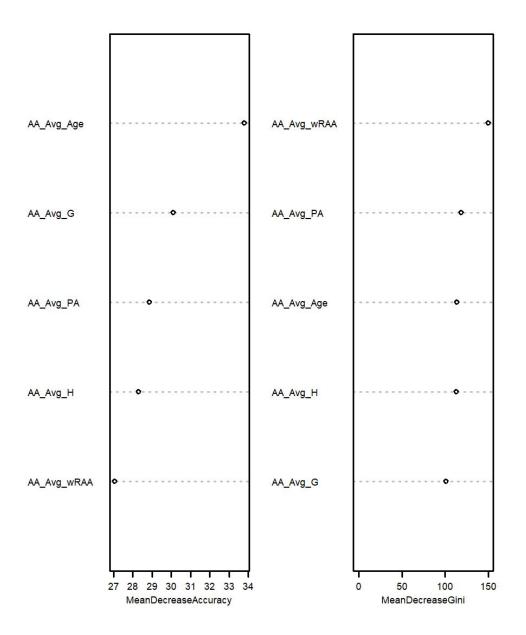
A-:



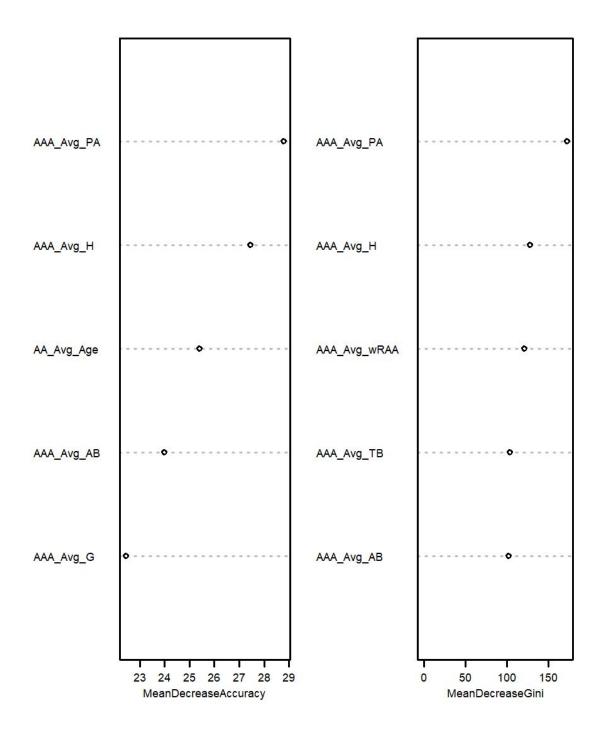
A:



AA:



AAA:



Gradient Boosting Results

Below are the top 20 variables by importance, from the Gradient Boosting model selected for the WAR model. While age is consistent with the Made It model, we find that playing statistics are better predictors of career WAR than total games or plate appearances for a particular level.

Rookie League:

Variable:	Rk_Avg_Age	Importance:	0.07
Variable:	Rk Avg CS norm	Importance:	0.06
Variable:	Rk Avg AB HR norm	Importance:	0.05
Variable:	Rk_Avg_IBB_norm	Importance:	0.03
Variable:	Rk_Avg_wOBA_norm	Importance:	0.03
Variable:	Rk_Avg_Bavg	Importance:	0.02
Variable:	Rk_Avg_BB	Importance:	0.02
Variable:	Rk_Avg_HBP_norm	Importance:	0.02
Variable:	Rk_Avg_HRpct_norm	Importance:	0.02
Variable:	Rk_Avg_OBP	Importance:	0.02
Variable:	Rk_Avg_orgs_norm	Importance:	0.02
Variable:	Rk_Avg_R_norm	Importance:	0.02
Variable:	Rk_Avg_SB	Importance:	0.02
Variable:	Rk_Avg_SecA	Importance:	0.02
Variable:	Rk_Avg_SH_norm	Importance:	0.02
Variable:	Rk_Avg_SLG	Importance:	0.02
Variable:	Rk_Avg_AB_norm	Importance:	0.01
Variable:	Rk_Avg_BABIP	Importance:	0.01
Variable:	Rk_Avg_BABIP_norm	Importance:	0.01
Variable:	Rk_Avg_Bavg_norm	Importance:	0.01

Low A:

Variable:	Low_A_Avg_AB_HR	Importance:	0.05
Variable:	Low_A_Avg_HBP_norm	Importance:	0.04
Variable:	Rk Avg GDP norm	Importance:	0.03
Variable:	Low A Avg OPS norm	Importance:	0.03
Variable:	Low A Sum SecA	Importance:	0.03
Variable:	Rk Avg HRpct norm	Importance:	0.02
Variable:	Low A Avg Age	Importance:	0.02
Variable:	Low A Avg CS norm	Importance:	0.02
Variable:	Low_A_Avg_OBP_norm	Importance:	0.02
Variable:	Low A Avg OPS	Importance:	0.02
Variable:	Low_A_Avg_SecA_norm	Importance:	0.02
Variable:	Low A Avg SOpct norm	Importance:	0.02
Variable:	Low A Avg SO norm	Importance:	0.02
Variable:	Low A Avg Tpl norm	Importance:	0.02
Variable:	Low A Sum BABIP	Importance:	0.02
Variable:	Low A Sum SO	Importance:	0.02
Variable:	Rk_Avg_Age	Importance:	0.01
Variable:	Rk Avg BB norm	Importance:	0.01
Variable:	Rk Avg Dbl	Importance:	0.01
Variable:	Rk Avg HBP norm	Importance:	0.01

A:

Variable:	A_Avg_Age	Importance:	0.09
Variable:	A_Avg_wOBA_norm	Importance:	0.06
Variable:	A AVE PA	Importance:	0.05
Variable:	A_Avg_Tpl_norm	Importance:	0.03
Variable:	A_Sum_BBpct	Importance:	0.03
Variable:	A Sum IBB	Importance:	0.03
Variable:	Rk_Avg_Age	Importance:	0.02
Variable:	Low A Sum SO	Importance:	0.02
Variable:	A_AVg_BABIP	Importance:	0.02
Variable:	A_Avg_Bavg_norm	Importance:	0.02
Variable:	A_Avg_HRpct_norm	Importance:	0.02
Variable:	A_Avg_IBB_norm	Importance:	0.02
Variable:	A Avg RBI norm	Importance:	0.02
Variable:	A Avg SH norm	Importance:	0.02
Variable:	Rk_Avg_AB_HR_norm	Importance:	0.01
Variable:	Rk_Avg_BB_norm	Importance:	0.01
Variable:	Rk_Avg_IBB_norm	Importance:	0.01
Variable:	Rk_Avg_ISO_norm	Importance:	0.01
Variable:	Rk_Avg_Tpl_norm	Importance:	0.01
Variable:	Rk_Sum_SO	Importance:	0.01
	CONTRACTOR OF THE PARTY OF THE	SOUTH THE SECTION AND ADDRESS.	

High A:

```
Variable: High A Avg Age
                               Importance: 0.11
Variable: High A Sum SecA
                               Importance: 0.05
Variable: High A Avg BBpct norm Importance: 0.04
Variable: High A Avg SecA
                               Importance: 0.04
Variable: High A Avg HRpct norm Importance: 0.03
Variable: High A Avg K BB norm Importance: 0.03
Variable: High A Avg IBB norm Importance: 0.02
Variable: High A Avg SOpct norm Importance: 0.02
Variable: High A Avg wOBA norm Importance: 0.02
Variable: Rk_Avg_HR_norm
                               Importance: 0.01
Variable: Low_A_Avg_Age
                               Importance: 0.01
Variable: Low A Avg SOpct
                               Importance: 0.01
Variable: A Avg Age
                               Importance: 0.01
Variable: A Avg G
                               Importance: 0.01
Variable: A_Avg_GDP_norm
                               Importance: 0.01
Variable: A Avg H
                               Importance: 0.01
Variable: A_Avg_PA_norm
                               Importance: 0.01
Variable: A_Avg_SH_norm
                               Importance: 0.01
Variable: A_Avg_wOBA_norm
                               Importance: 0.01
Variable: A Sum BABIP
                               Importance: 0.01
```

AA:

Variable:	High_A_Avg_Age	Importance:	0.1
Variable:	AA_Avg_wRAA	Importance:	0.06
Variable:	AA_Avg_Age	Importance:	0.04
Variable:	AA_Avg_BABIP_norm	Importance:	0.02
Variable:	AA_Avg_OBP	Importance:	0.02
Variable:	AA_Sum_wRAA	Importance:	0.02
Variable:	High_A_Sum_SecA	Importance:	0.02
Variable:	Rk_Avg_CS_norm	Importance:	0.01
Variable:	Low_A_Avg_SecA_norm	Importance:	0.01
Variable:	Low_A_Sum_SB	Importance:	0.01
Variable:	AA_Avg_AB_HR	Importance:	0.01
Variable:	AA_Avg_BABIP	Importance:	0.01
Variable:	AA_Avg_Bavg	Importance:	0.01
Variable:	AA_Avg_Bavg_norm	Importance:	0.01
	AA_Avg_BBpct_norm	Importance:	0.01
Variable:	AA_Avg_GDP_norm	Importance:	0.01
Variable:	AA_Avg_IBB	Importance:	0.01
Variable:	AA_Avg_K_BB	Importance:	0.01
Variable:	AA_Avg_OBP_norm	Importance:	0.01
Variable:	AA_Avg_OPS_norm	Importance:	0.01

AAA:

Variable:	AAA Avg AB HR norm	Importance:	0.07
Variable:	AAA Avg GDP norm	Importance:	0.06
	AAA Avg IBB norm	Importance:	0.05
Variable:	AAA Sum G	Importance:	0.04
Variable:	AAA Avg Age	Importance:	0.03
Variable:	AAA_Avg_Bavg_norm	Importance:	0.03
	High A Avg Age	Importance:	0.03
Variable:	AAA Avg Dbl norm	Importance:	0.02
Variable:	AAA Sum K BB	Importance:	0.02
Variable:	AAA AVg AB HR	Importance:	0.01
Variable:	AAA Avg AB norm	Importance:	0.01
Variable:	AAA AVg G	Importance:	0.01
Variable:	AAA Avg H norm	Importance:	0.01
Variable:	AAA Avg K BB norm	Importance:	0.01
Variable:	AAA_AVg_OPS	Importance:	0.01
Variable:	AAA_Avg_orgs_norm	Importance:	0.01
Variable:	AAA_Avg_RBI_norm	Importance:	0.01
Variable:	AAA_Avg_SF_norm	Importance:	0.01
Variable:	AAA_Avg_SH_norm	Importance:	0.01
Variable:	AAA Avg SO norm	Importance:	0.01

Mets' Prospect Tables

The following tables show the likelihood of the Mets' prospects and their expected WAR, based on their career statistics in each level of the minor leagues as of 2017. All players have appeared in less than two MLB seasons. Prospects may be called up to replace injured players while not being ready for a full time position, limiting the number of years they have appeared in the MLB helps clarify a prospect versus a player who has successfully graduated to the major leagues. This list only includes positive eWAR players.

Mets AAA Propsects by eWAR						
Player	Position	Level	pWAR	pMade it	eWAR	
Dominic Smith	1B	AAA	8.0	29%	2.3	
Jeff McNeil	2B	AAA	9.7	18%	1.7	
Amed Rosario	SS	AAA	9.9	16%	1.5	
Josh Rodriguez	3B	AAA	3.2	45%	1.4	
Travis Taijeron	OF	AAA	3.6	34%	1.3	
Phillip Evans	SS	AAA	5.6	14%	0.8	
L.J. Mazzilli	2B	AAA	7.0	8%	0.6	
Cody Decker	1B	AAA	3.5	13%	0.4	
Jhoan Urena	3B	AAA	7.3	6%	0.4	
Gustavo Nunez	2B-SS	AAA	4.5	9%	0.4	
John Mora	OF	AAA	7.5	3%	0.3	
Xorge Carrillo	С	AAA	7.8	3%	0.2	
Victor Cruzado	OF	AAA	5.1	5%	0.2	
Arnaldo Berrios	CF	AAA	11.0	1%	0.2	
Jayce Boyd	1B	AAA	6.5	2%	0.1	
Jeffrey Glenn	С	AAA	8.7	1%	0.1	
Dale Burdick	SS	AAA	10.1	1%	0.1	
Jio Mier	SS	AAA	4.3	1%	0.1	

Mets AA Propsects by eWAR					
Player	Position	Level	pWAR	pMade it	eWAR
Peter Alonso	IF	AA	4.4	84%	3.7
Luis Guillorme	SS	AA	5.5	58%	3.2
Kevin Kaczmarski	OF	AA	5.4	15%	0.8
Kevin Taylor	2B	AA	5.6	13%	0.7
David Thompson	OF	AA	5.2	13%	0.7
Matt Oberste	1B	AA	4.8	13%	0.7
Patrick Mazeika	C-1B	AA	5.2	11%	0.6
Tomas Nido	c	AA	4.2	9%	0.4
Champ Stuart	OF	AA	3.9	6%	0.2
Colton Plaia	c	AA	3.6	3%	0.1
Tyler Moore	C-IF	AA	4.0	2%	0.1
Jean Rodriguez	3B-SS	AA	6.3	1%	0.1
Patrick Biondi	OF	AA	4.0	1%	0.1

Me	ets A+ Pro	psects	by eW	AR	
Player	Position	Level	pWAR	pMade it	eWAR
Anthony Dimino	С	A+	7.4	33%	2.5
Victor Moscote	DH	Α+	6.6	30%	1.9
Ian Strom	CF	A+	10.6	10%	1.0
Michael Paez	SS	Α+	5.8	16%	0.9
Wuilmer Becerra	RF-OF	Α+	6.0	12%	0.7
Nick Sergakis	3B	Α+	5.6	12%	0.7
Jacob Zanon	CF	A+	6.8	8%	0.5
Eudor Garcia	IF	Α+	6.1	7%	0.4
Leon Byrd	2B	A+	6.3	6%	0.4
Vinny Siena	IF	Α+	5.5	4%	0.2
Brandon Brosher	OF	Α+	8.3	2%	0.2
Enmanuel Zabala	OF	Α+	5.9	2%	0.1
Colby Woodmans	(IF	Α+	6.1	2%	0.1
Jeff Diehl	1B-RF	Α+	7.4	1%	0.1
Daniel Rizzie	С	A+	6.1	1%	0.1
J.J. Franco	SS	Α+	6.2	1%	0.0
Jose Garcia	С	A+	5.8	1%	0.0
Tim Tebow	OF	Α+	6.5	0%	0.0

M	ets A Pro	psects	by eWA	R	
Player	Position	Level	pWAR	pMade it	eWAR
Andres Gimenez	SS	Α	11.1	32%	3.6
Luis Carpio	SS	Α	6.8	14%	0.9
Dash Winningham	1B	Α	5.6	11%	0.6
Gene Cone	OF	Α	5.6	9%	0.5
Desmond Lindsay	OF	Α	5.6	9%	0.5
Oliver Pascual	SS	Α	9.7	2%	0.2
Blake Tiberi	IF	Α	5.8	3%	0.2
Jay Jabs	3B	Α	5.8	3%	0.2
Milton Ramos	SS	Α	5.6	2%	0.1
Ali Sanchez	c	Α	5.7	2%	0.1
Reed Gamache	IF	Α	5.6	1%	0.1
Natanael Ramos	c	Α	6.0	0%	0.0
Ricardo Cespedes	OF	Α	13.1	0%	0.0

M	ets A- Pro	psects	by eW/	AR	
Player	Position	Level	pWAR	pMade it	eWAR
Matt Winaker	OF	A-	7.8	11%	0.8
Walter Rasquin	1B	A-	9.9	6%	0.6
Edgardo Fermin	SS	Α-	7.8	6%	0.5
Yeffry De Aza	IF	A-	4.6	8%	0.4
Wagner Lagrange	OF	A-	6.0	4%	0.3
Jeremy Vasquez	1B-OF	A-	4.1	4%	0.2
Scott Manea	С	A-	5.8	3%	0.2
Dylan Snypes	SS	A-	7.0	2%	0.1
Guillermo Granad	OF	Α-	5.6	2%	0.1
Carlos Sanchez	С	A-	5.2	1%	0.1
Carl Stajduhar	C-IF	A-	5.0	1%	0.1
Jeremy Wolf	OF	A-	4.4	1%	0.1
Franklin Correa	2B	A-	7.2	1%	0.1
Dionis Paulino	OF	A-	6.8	0%	0.0
Jose Maria	С	A-	5.1	0%	0.0
Cecilio Aybar	SS	Α-	7.1	0%	0.0
Matthew Foley	С	A-	5.8	0%	0.0
Tim Tebow	OF	Α+	6.5	0%	0.0



Mets Rool	ie League	Props	ects by	eWAR	
Player	Position	Level	pWAR	pMade it	eWAR
Luis Santana	2B	Rk	7.9	13%	1.1
Moises Gonzalez	OF	Rk	16.0	6%	1.0
Wilfred Astudillo	C	Rk	8.7	11%	0.9
Jean Carlos Soto	OF	Rk	10.6	8%	0.8
Jhoander Saez	OF	Rk	7.0	12%	0.8
Jeison Rodriguez	OF	Rk	16.7	4%	0.7
Shervyen Newton	SS	Rk	6.5	11%	0.7
Jorge Martinez	С	Rk	12.8	5%	0.7
Alexis Marquez	3B	Rk	12.6	5%	0.6
Juan De La Rosa	OF	Rk	6.9	9%	0.6
Sebastian Espino	SS	Rk	7.2	8%	0.6
Kenny Hernandez	SS	Rk	10.8	5%	0.5
Ranfy Adon	OF	Rk	6.0	8%	0.5
Rigoberto Terrazas	3B	Rk	6.3	7%	0.5
Pedro Ventura	SS	Rk	10.8	4%	0.5
Anthony Dirocie	OF	Rk	10.4	4%	0.5
Luis Montero	3B	Rk	6.9	7%	0.5
Cristopher Pujols	3B	Rk	7.8	6%	0.4
Hansel Moreno	SS	Rk	7.2	6%	0.4
Kevin Torres	С	Rk	7.9	5%	0.4
Juan Uriarte	С	Rk	7.0	5%	0.4
Wilmer Reyes	SS	Rk	6.9	6%	0.4
Anderson Bohorquez	SS	Rk	6.4	6%	0.4
Domingo Martinez	С	Rk	6.6	5%	0.4
Jose Peroza	3B	Rk	6.6	5%	0.3
Grabiel Jimenez	OF	Rk	7.7	4%	0.3



Me	ts Rookie I	10.0	ropsects by e	WAR	
Player	Position	Level	pWAR	pMade it	eWAR
Gregory Guerrero	SS	Rk	6.0	5%	0.3
Raphael Gladu	OF	Rk	5.8	5%	0.3
Wilmy Valdez	1B	Rk	12.5	2%	0.3
Raul Beracierta	OF	Rk	6.9	4%	0.3
Angel Manzanarez	SS	Rk	6.0	5%	0.3
Tulio Garcia	OF	Rk	12.4	2%	0.3
David Lozano	2B	Rk	6.6	4%	0.3
Danny Hoy	IF	Rk	6.8	4%	0.3
Alejandro Medina	DH	Rk	7.5	3%	0.3
Yoel Romero	SS	Rk	6.0	4%	0.3
Mark Vientos	3B	Rk	6.1	4%	0.2
Edinson Valdez	OF	Rk	5.9	3%	0.2
Luis Lebron	С	Rk	6.9	3%	0.2
Andres Regnault	С	Rk	5.4	3%	0.2
Rafael Valdez	SS	Rk	6.2	3%	0.2
Robby Kidwell	С	Rk	9.3	2%	0.2
Jack Schneider	CF	Rk	6.1	2%	0.1
Kenneth Bautista	OF	Rk	5.6	2%	0.1
Eulises Sanchez	OF	Rk	5.3	2%	0.1
Gilberto Espinoza	OF	Rk	6.4	1%	0.1
Gavin Garay	SS	Rk	5.5	2%	0.1
Jose Mena	С	Rk	5.8	1%	0.1
Kevin Hall	С	Rk	5.3	1%	0.1
Julio Rene	OF	Rk	5.3	1%	0.1
Yordin Araujo	OF	Rk	5.3	1%	0.1
Ezequiel Pena	OF	Rk	11.8	0%	0.0

Mariners' Prospect Tables

The following tables show the likelihood of the Mariners' prospects and their expected WAR, based on their career statistics in each level of the minor leagues as of 2017. All players have appeared in less than two MLB seasons. Prospects may be called up to replace injured players while not being ready for a full time position, limiting the number of years they have appeared in the MLB helps clarify a prospect versus a player who has successfully graduated to the major leagues.

Marine	rs AAA Pr	opsect	s by eW	AR	
Player	Position	Level	pWAR	pMade it	eWAR
Eric Filia	OF	AAA	17.0	15%	2.5
Tyler O'Neill	OF	AAA	9.0	21%	1.9
Gianfranco Wawoe	2B	AAA	10.3	16%	1.6
Seth Mejias-Brean	1B-3B	AAA	4.9	34%	1.6
Ryan Scott	С	AAA	11.9	14%	1.6
Andrew Aplin	OF	AAA	4.3	30%	1.3
Ian Miller	OF	AAA	8.2	11%	0.9
D.J. Peterson	3B	AAA	4.6	18%	0.8
Kevin Santa	SS	AAA	8.6	8%	0.7
Joseph Rosa	SS	AAA	17.4	4%	0.7
Mike Marjama	С	AAA	4.6	15%	0.7
Ryan Casteel	С	AAA	6.1	11%	0.7
Logan Taylor	IF	AAA	11.6	5%	0.6
Austin Grebeck	OF	AAA	10.5	6%	0.6
Tyler Smith	SS	AAA	5.3	10%	0.6
Dario Pizzano	OF	AAA	7.0	6%	0.4
Danny Muno	2B	AAA	4.0	6%	0.2
Zach Shank	2B-SS	AAA	4.4	5%	0.2
Chantz Mack	OF	AAA	9.9	2%	0.2
Sebastian Valle	С	AAA	4.4	3%	0.2
Steven Baron	С	AAA	4.5	3%	0.1
Joey Wong	SS-3B	AAA	4.2	3%	0.1
Alexander Capriata	С	AAA	8.8	1%	0.1
Eugene Helder	SS	AAA	11.4	1%	0.1
Rayder Ascanio	SS	AAA	11.9	1%	0.1
Marcus Littlewood	С	AAA	11.3	0%	0.0
Brock Hebert	SS-2B	AAA	10.6	0%	0.0
Jhombeyker Morales	SS	AAA	12.7	0%	0.0
Daniel Torres	С	AAA	11.3	0%	0.0
Brayan Hernandez	OF	AAA	11.7	0%	0.0

Mar	Mariners AA Propsects by eWAR								
Player	Position	Level	pWAR	pMade it	eWAR				
Braden Bishop	OF	AA	6.2	60%	3.7				
Joey Curletta	RF-OF	AA	4.4	32%	1.4				
Tyler Marlette	С	AA	4.0	28%	1.1				
Chuck Taylor	OF	AA	4.2	18%	0.8				
Chris Mariscal	SS	AA	4.2	15%	0.6				
Keury De la cruz	OF	AA	4.2	14%	0.6				
Luis Liberato	OF	AA	6.4	9%	0.6				
Jordan Cowan	2B-SS	AA	6.8	6%	0.4				
Jay Baum	IF-OF	AA	3.8	9%	0.4				
Justin Seager	1B-3B	AA	5.6	4%	0.2				
Adam Law	OF-3B	AA	4.6	3%	0.2				
Nelson Ward	IF	AA	3.7	4%	0.1				
Willie Argo	OF	AA	3.7	3%	0.1				
Kyle Petty	1B	AA	3.7	2%	0.1				

Mariners A+ Propsects by eWAR								
Player	Position	Level	pWAR	pMade it	eWAR			
Gareth Morgan	OF	A+	8.8	35%	3.0			
Donnie Walton	SS	Α+	5.9	38%	2.2			
Kyle Lewis	OF	A+	5.6	14%	0.8			
Joe Rizzo	3B	A+	6.1	8%	0.5			
Joe DeCarlo	3B	A+	6.0	7%	0.4			
Ricky Eusebio	OF	A+	5.8	7%	0.4			
Arturo Nieto	С	A+	5.5	1%	0.0			

Mariners A Propsects by eWAR								
Player	Position	Level	pWAR	pMade it	eWAR			
Anthony Jimenez	OF	Α	7.4	18%	1.4			
Nick Zammarelli	3B	Α	5.9	12%	0.7			
Bryson Brigman	SS	Α	5.7	10%	0.6			
Johnny Slater	ĊF	Α	9.4	4%	0.3			
Dimas Ojeda	LF	Α	5.6	5%	0.3			
Luis Rengifo	2B	Α	5.9	4%	0.2			
Johan Quevedo	c	Α	6.2	3%	0.2			
Billy Cooke	OF-IF	Α	5.6	3%	0.2			
Nick Thurman	C	Α	5.7	2%	0.1			
Conner Hale	IF	Α	5.6	1%	0.1			
Kristian Brito	1B	A	5.6	1%	0.1			
Louis Boyd	IF	Α	6.0	1%	0.0			



Mar	Mariners A- Propsects by eWAR									
Player	Position	Level	pWAR	pMade it	eWAR					
Christopher Torre	SS	A-	7.1	13%	0.9					
Johnny Adams	IF	A-	5.1	15%	0.7					
Evan White	1B-OF	Α-	8.7	8%	0.7					
Geoandry Montil	1B	A-	5.1	11%	0.6					
David Banuelos	С	Α-	3.9	10%	0.4					
Osmy Gregorio	2B	A-	8.1	2%	0.1					
Joe Venturino	2B	A-	6.1	2%	0.1					
Onil Pena	С	A-	5.3	2%	0.1					
Jansiel Rivera	CF	A-	4.6	2%	0.1					
Ronald Rosario	OF	A-	5.3	2%	0.1					
Troy Dixon	С	A-	3.6	2%	0.1					
Manny Pazos	С	A-	4.2	1%	0.0					
Aaron Stroosma	OF	A-	6.5	1%	0.0					
Greifer Andrade	SS	A-	2.8	1%	0.0					
Jonas Lantigua	1B	A-	6.8	0%	0.0					
Juan Camacho	С	A-	2.8	0%	0.0					
James Lovett	С	Α-	7.1	0%	0.0					

Mariners Rookie Propsects by eWAR							
Player	Position	Level	pWAR	pMade it	eWAR		
Alexander Campos	SS	Rk	17.3	18%	3.1		
Jack Larsen	OF	Rk	7.1	18%	1.3		
Ryan Costello	IF	Rk	6.9	17%	1.2		
Freuddy Batista	С	Rk	16.2	6%	0.9		
Cesar Izturis	2B	Rk	9.9	9%	0.9		
Nolan Perez	3B	Rk	6.9	8%	0.6		
Sebastian Ochoa	OF	Rk	6.5	8%	0.5		
Daniel Santos	С	Rk	10.4	5%	0.5		
Danny Contreras	OF	Rk	10.8	5%	0.5		
Luis Veloz	OF	Rk	17.0	3%	0.5		
Ryan Garcia	1B	Rk	5.9	7%	0.4		
Ismerling Mota	С	Rk	6.6	4%	0.3		
Miguel Perez	OF	Rk	8.1	3%	0.3		
Robert Perez	OF	Rk	8.5	3%	0.3		
Connor Hoover	SS	Rk	6.2	4%	0.3		
Oberto Munoz	С	Rk	5.7	4%	0.2		
Luis Joseph	2B	Rk	5.9	4%	0.2		
Jepherson Garcia	DH	Rk	8.2	2%	0.2		
DeAires Moses	OF	Rk	5.2	2%	0.1		
Jose Sandoval	OF	Rk	5.3	1%	0.1		
Jose Cano	3B	Rk	5.2	1%	0.0		
Steve Branche	SS	Rk	10.1	0%	0.0		
Caleb Eldridge	1B-OF	Rk	5.6	1%	0.0		

References

Baseball Reference. (n.d.). MLB Stats, Scores, History, & Records. Retrieved July 9, 2018, from https://www.baseball-reference.com/

Fangraphs Baseball. (n.d.). Baseball Statistics and Analysis | FanGraphs Baseball. Retrieved July 9, 2018, from https://www.fangraphs.com/

Gaines, C. (2013, June 7). Most Baseball Draft Picks Will Still Be In The Minors Four Years From Now. Retrieved July 7, 2018, from

http://www.businessinsider.com/chart-how-long-it-takes-a-draft-pick-to-reach-major-league-baseball-2013-6

High School Baseball Web. (n.d.). Probability Of Playing College and Professional Baseball. Retrieved July 9, 2018, from http://www.hsbaseballweb.com/probability.htm

Major League Baseball. (n.d.). The Official Site of Major League Baseball. Retrieved July 9, 2018, from https://www.mlb.com/

Mitchell, C. (2014, December 30). KATOH: Forecasting Major League Hitting with Minor League Stats. Retrieved July 9, 2018, from

https://www.fangraphs.com/tht/katoh-forecasting-a-hitters-major-league-performance-with-minor-league-stats/

MLB Advanced Media, LP. (n.d.) Advanced Stats | Glossary. Retrieved July 31, 2018, from http://m.mlb.com/glossary/advanced-stats

NCAA Research. (2018, April 20). Estimated probability of competing in professional athletics. Retrieved July 9, 2018, from

http://www.ncaa.org/about/resources/research/estimated-probability-competing-professional-athletics

Oaxaca, R. (1973). Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review, 14*(3), 693-709. Retrieved July 9, 2018, from https://www.jstor.org/stable/2525981?seq=1#page_scan_tab_contents.

OKennedy, P. (2013, March 5). What are the odds of making it to the major leagues? Retrieved July 9, 2018, from

https://www.blessyouboys.com/2013/3/5/3977782/what-are-the-odds-of-making-it-to-the-major-leagues

Owens, F. (2017, June 26). What percentage of minor league baseball players will ever reach the majors? Retrieved July 9, 2018, from

https://www.quora.com/What-percentage-of-minor-league-baseball-players-will-ever-reachthe-majors

Rosenbaum, M. (2012, June 12). Examining the Percentage of MLB Draft Picks Who Reach the Major Leagues. Retrieved July 9, 2018, from

https://bleacherreport.com/articles/1219356-examining-the-percentage-of-mlb-draft-picks-that-reach-the-major-leagues#slide0

Sickels, J. (2018, February 15). New York Mets Top 20 prospects for 2018. Retrieved from https://www.minorleagueball.com/2018/2/14/17015250/new-york-mets-top-20-prospects-for -2018

The Baseball Cube. (n.d.) Stats Glossary. Retrieved July 30, 2018, from http://www.thebaseballcube.com/about/stats_glossary.asp

The Baseball Cube. (n.d.). The Baseball Cube - MLB, Minor League, College Statistics, Data and the Draft. Retrieved July 9, 2018, from http://www.thebaseballcube.com/



Code

Code and internal analysis information available in included Zip file.