

master Chef

Who will win?

By: Theran Meadows



A wooden cutting board with a knife on the left and green herbs on the right.

Table of Contents

1. About the Data
2. Preparing the Data
3. What is the Problem
4. Exploratory Data Analysis
5. Predicting the Winner
6. Recommendations

About the Data

- Compiled from [Masterusa.fandom.com/wiki](https://masterusa.fandom.com/wiki)

Contestant information

- Name
- Age
- Hometown
- Occupation
- Status

Contestant	Age	Hometown	Occupation	Status
Whitney Miller	22	Poplarville, Mississippi	College Student	Winner September 15
David Miller	29	Boston, Massachusetts	Software Engineer	Runner-Up September 15
Lee Knaz	27	Venice, California	Bartender	Eliminated September 15
Sheetal Bhagat	37	Chicago, Illinois	Teacher	
Sharone Hakman	28	Los Angeles, California	Financial Advisor	Eliminated September 8
Mike Kim	34	Redondo Beach, California	Server	
Jake Gandolfo	38	Santa Cruz, California	Construction Worker	Eliminated September 1
Tracy Nailor	42	Atlanta, Georgia	Doctor	
Kim Dung "Slim" Huynh	22	Harvey, Louisiana	College Student	

About the Data

Place	Contestant	Episode															
		4	5	6	7	8	9	10	11	12	13						
1	Whitney	WIN	IN	PT	HIGH	IN	PT	IN	LOW	WIN	HIGH	WIN	LOW	WIN	IMM	WIN	WINNER
2	David	IN	IN	PT	IN	IN	WIN	IN	IN	WIN	IN	IN	WIN	IMM	WIN	IMM	RUNNER-UP
3	Lee	IN	IN	WIN	IN	IN	PT	WIN	WIN	LOW	IN	LOW	HIGH	IMM	IMM	ELIM	
4	Sheetal	IN	IN	WIN	IN	IN	WIN	HIGH	LOW	WIN	WIN	LOW	IN	IMM	ELIM		
5	Sharone	IN	IN	PT	WIN	IMM	WIN	HIGH	IN	WIN	HIGH	IN	LOW	ELIM			
6	Mike	IN	WIN	WIN	IN	LOW	WIN	IN	IN	PT	IN	ELIM					
7	Jake	HIGH	IN	WIN	HIGH	WIN	PT	IN	IN	ELIM							
	Tracy	IN	IN	WIN	IN	IN	PT	IN	LOW	ELIM							
9	Slim	IN	IN	PT	IN	LOW	WIN	IN	ELIM								
10	Tony	IN	IN	WIN	IN	IN	ELIM										
11	Faruq	IN	LOW	PT	IN	ELIM											
12	Jenna	IN	IN	ELIM													
13	Avis	IN	ELIM														
	Sheena	HIGH	ELIM														

 (WINNER) This cook won the competition.

 (RUNNER-UP) This cook finished in second place.

 (WIN) The cook won an individual challenge (**Mystery Box Challenge**, **Elimination Test**, or **Pressure Test**)


 (WIN) The cook was on the winning team in the **Team Challenge** and directly advanced to the next round.

 (HIGH) The cook was one of the top entries in an individual challenge, but didn't win.

 (IN) The cook wasn't selected as a top or bottom entry in an individual challenge.

 (IMM) The cook didn't have to compete in that round of the competition and was safe from elimination.

 (PT) The cook was on the losing team in the **Team Challenge** and competed in the **Pressure Test**.

 (LOW) The cook was one of the bottom entries in an individual challenge or **Pressure Test**, but advanced.

 (ELIM) The cook was eliminated from MasterChef.

Preparing the Data

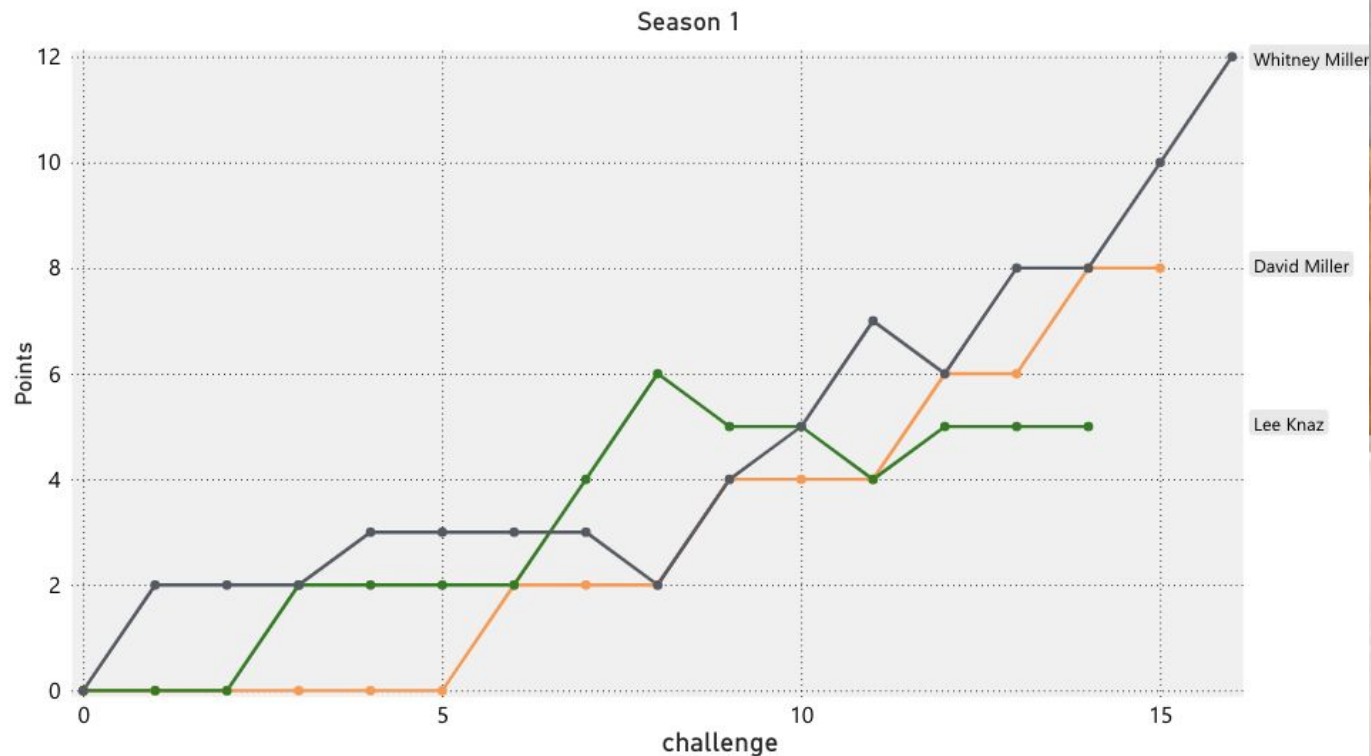
Point System

- Everyone starts at 0
- 1 point for top 3
- 2 points for winner
- -1 point for bottom 3
- Points stop once eliminated

[illegible]

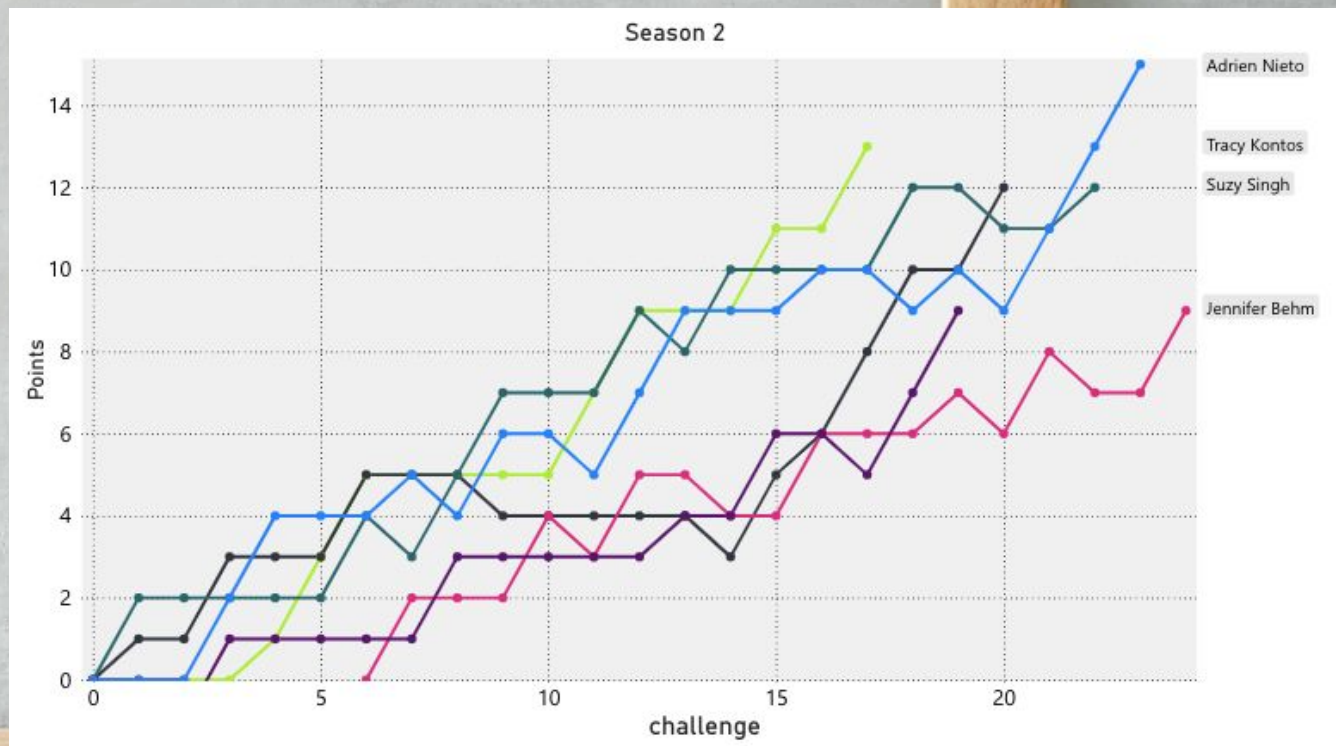
Exploratory Data Analysis: Season 1

Name	Status
Whitney Miller	1st
David Miller	2nd
Lee Knaz	3rd
Sheetal Bhagat	3rd
Mike Kim	4th
Sharone Hakman	4th
Jake Gandolfo	5th
Tracy Nailor	5th
Anthony Carbone	6th
Faruq Jenkins	6th
Avis White	7th
Jenna Hamiter	7th
Sheena Zadeh	7th



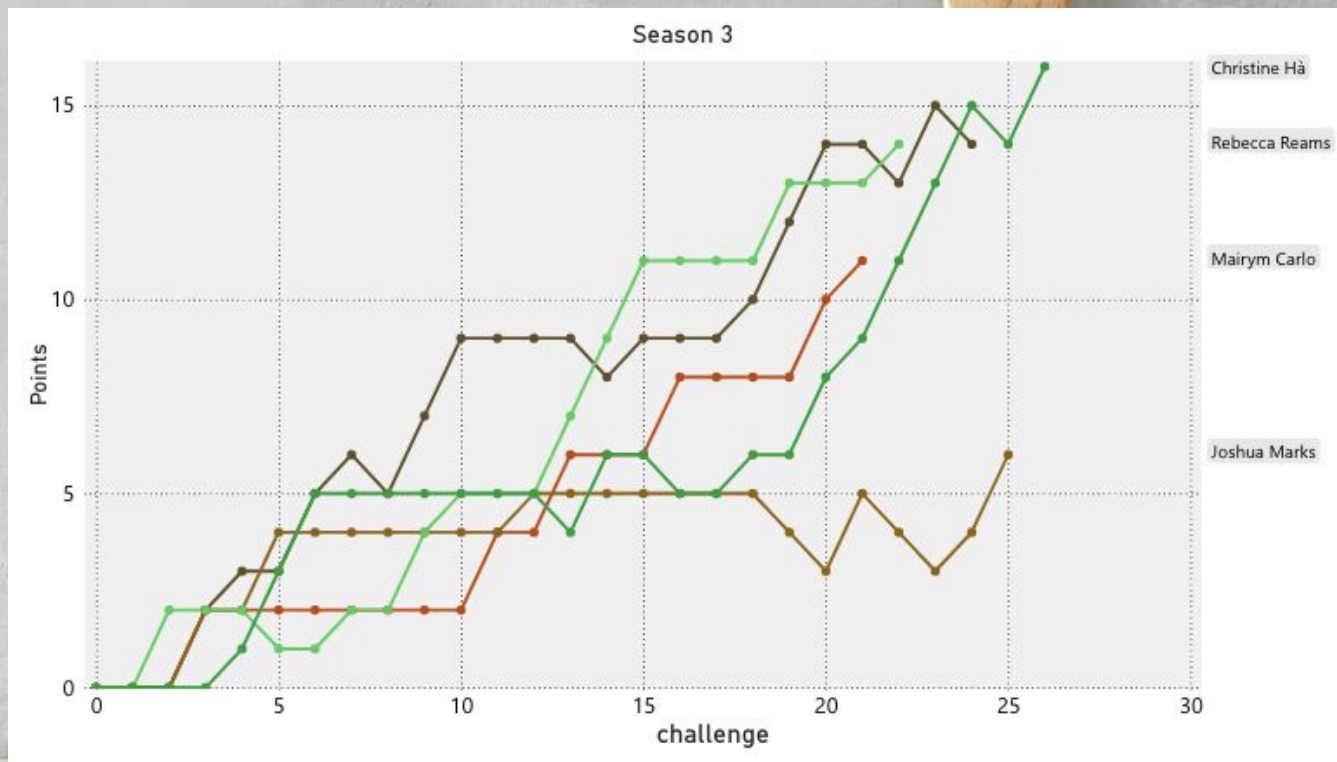
Exploratory Data Analysis: Season 2

Name	Status
Jennifer Behm	1st
Adrien Nieto	2nd
Christian Collins	3rd
Suzy Singh	4th
Ben Starr	5th
Tracy Kontos	6th
Derrick Prince	7th
Christine Corley	7th
Alejandra Schrader	8th
Giuseppe Morisco	9th
Erryn Cobb	10th
Esther Kang	11th
Jennie Kelley	12th
Max Kramer	13th
Alvin Schultz	14th
Tony Scruggs	15th
Angel Moore-Soukkay	16th
Mark Raffaelli	16th



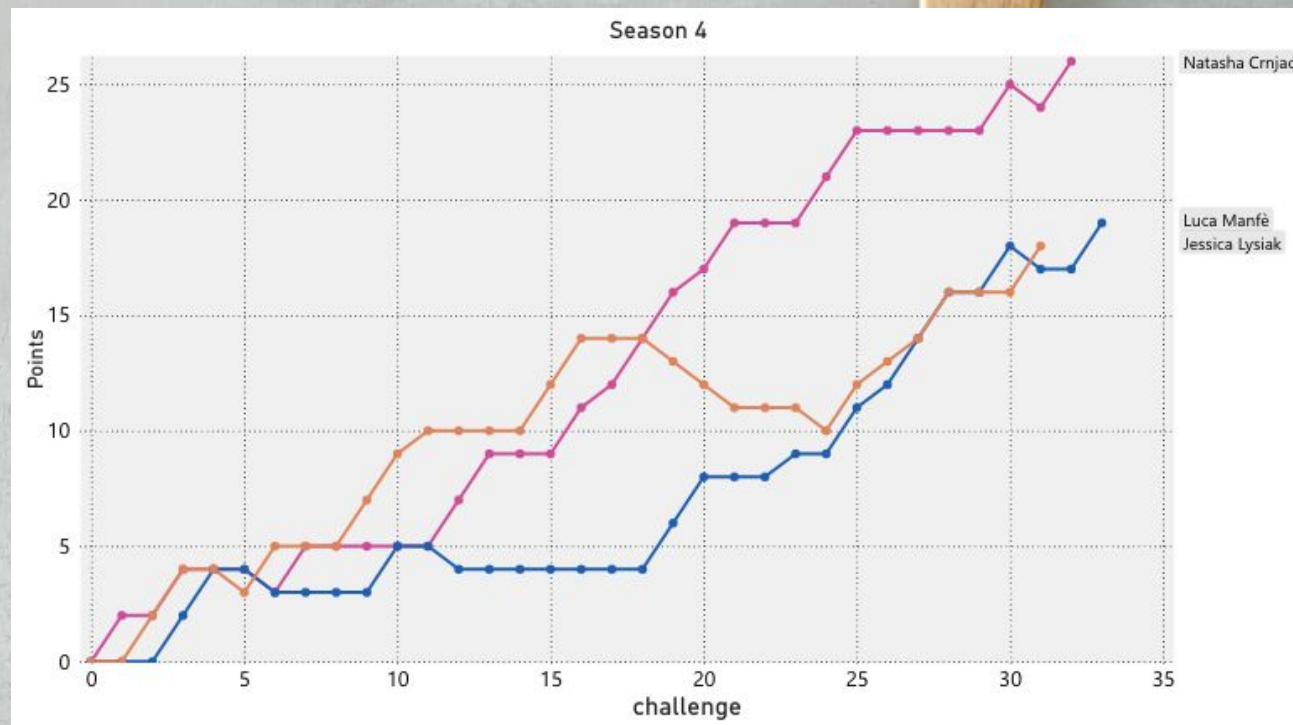
Exploratory Data Analysis: Season 3

Name	Status
Christine Hà	1st
Joshua Marks	2nd
Rebecca Reams	3rd
Franklin Mirando	4th
Mairym Carlo	5th
David Martinez	6th
Felix Fang	7th
Stacey Amagrande	8th
Tali Clavijo	9th
Michael Hill	10th
Tanya Noble	10th
Anna Rossi	11th
Scott Little	12th
Ryan Umane	13th
Helene Leeds	14th
Michael Chen	15th
Dave Mack	16th
Samantha De Silva	16th



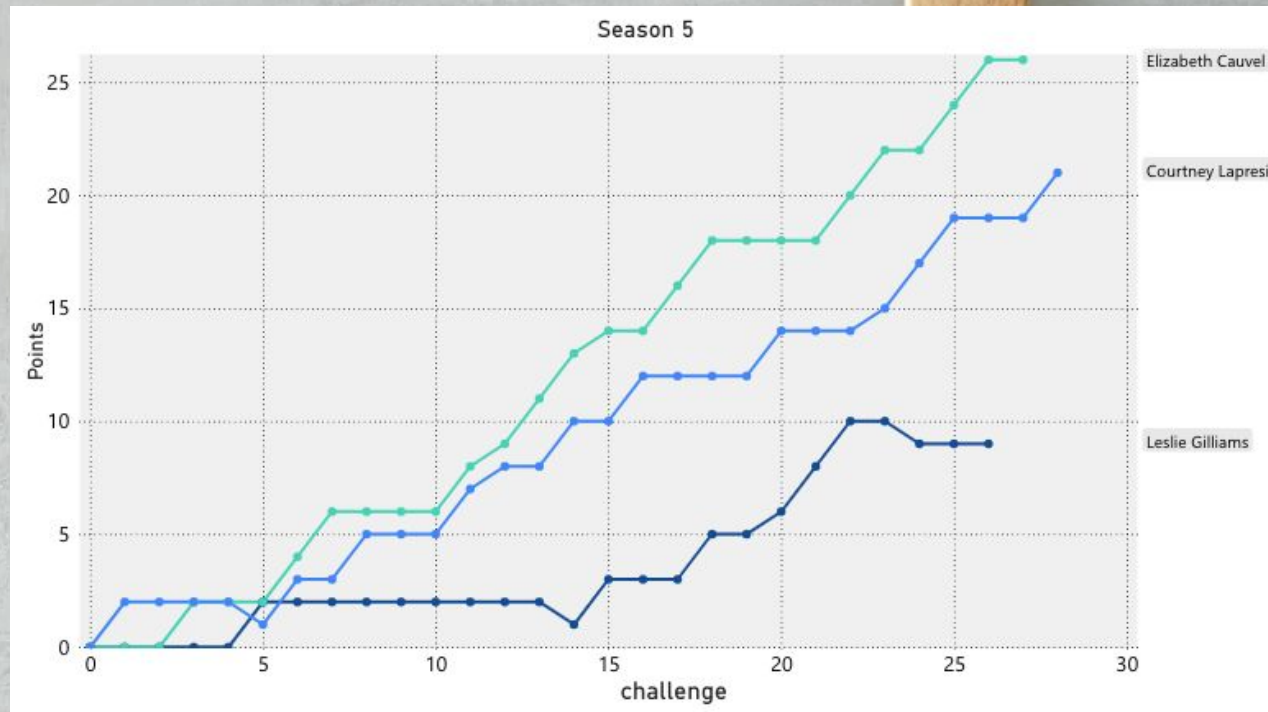
Exploratory Data Analysis: Season 4

Name	Status
Luca Manfè	1st
Natasha Crnjac	2nd
Jessica Lysiak	3rd
Krissi Biasiello	3rd
James Nelson	4th
Brianna Kozior	5th
Jordan Roots	6th
Eddie Jackson	7th
Bethy Rossos	8th
Savannah Sturges	9th
Lynn Chyi	9th
Jonathan Blanchard	10th
Elizabeth Kirby	10th
Albaya Cruz	11th
Howard Simpson	11th
Kathleen Prieto	12th
Malcolm Green	13th
Adriana Guillen	13th
Sasha Foxx	14th



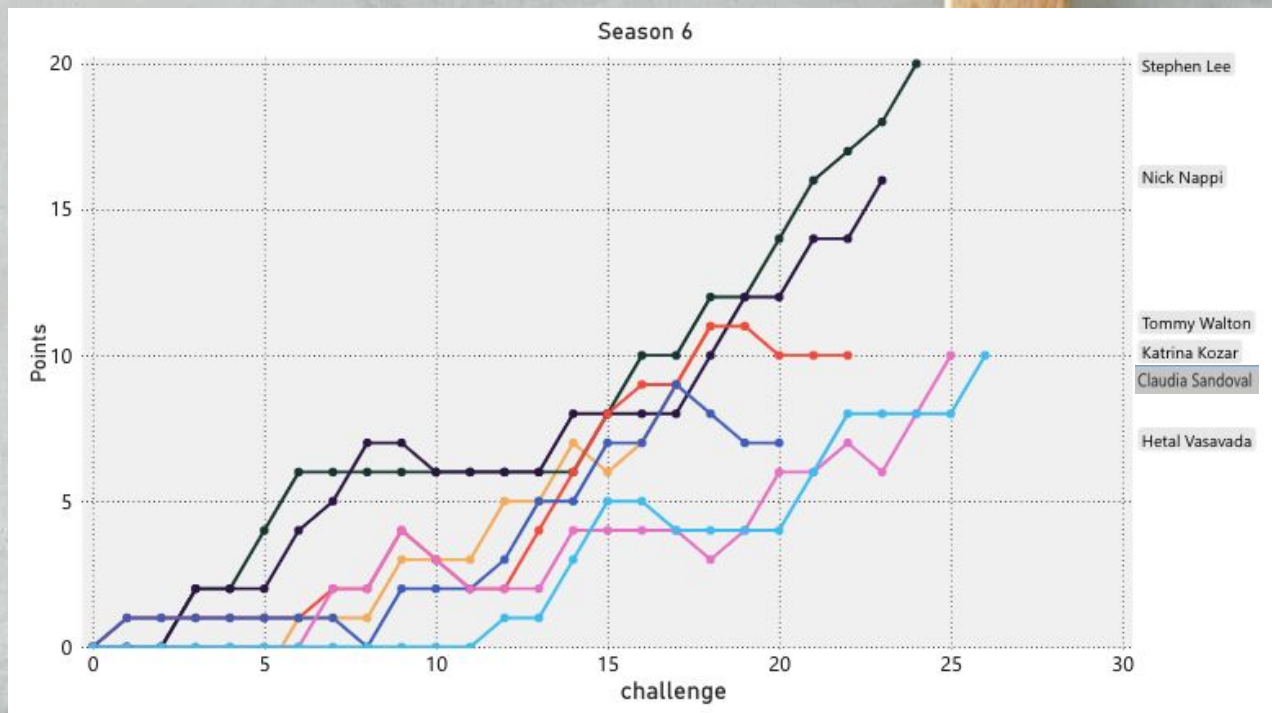
Exploratory Data Analysis: Season 5

Name	Status
Courtney Lapresi	1st
Elizabeth Cauvel	2nd
Leslie Gilliams	3rd
Joshua Brewer	4th
Christian Green	5th
Willie Mike	6th
Daniel McGuffey	7th
Ahran Cho	8th
Victoria Scroggins	9th
Francis Legge	9th
Christine Silverstein	10th
Elise Mayfield	11th
Dan Wu	12th
Francis Biondi	13th
Tyler Viars	14th
Jordan Kaminski	15th
Kira Novak	16th
Gordon Houston	17th
Stephani Syfax-Shepherd	18th
Whitney Bray	19th
Astrid Lavenia	19th



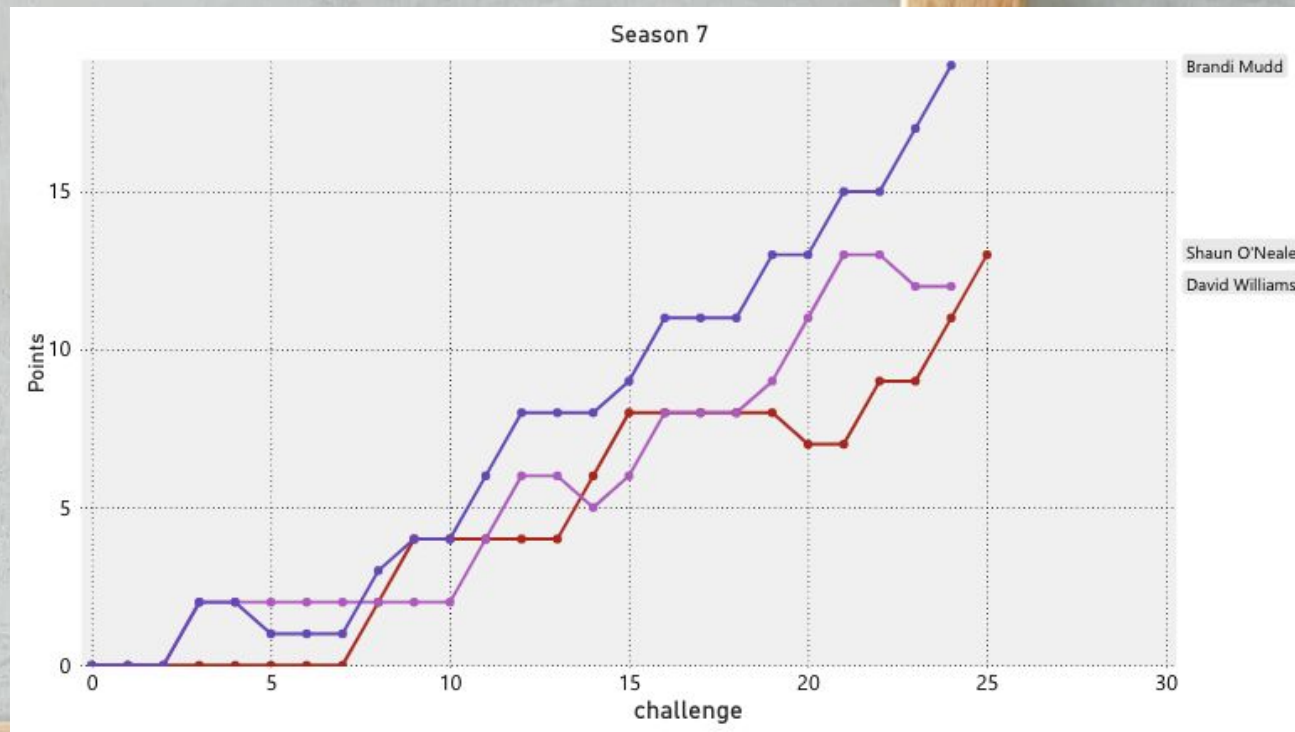
Exploratory Data Analysis: Season 6

Name	Status
▲ Claudia Sandoval	1st
Derrick Peltz	2nd
Stephen Lee	3rd
Nick Nappi	4th
Katrina Kozar	5th
Hetal Vasavada	6th
Tommy Walton	7th
Olivia Crouppen	8th
Shelly Flash	9th
Christopherher Lu	10th
Sara Zacek	11th
Kerry Prince	12th
Amanda Saab	13th
Charlie Chapman	13th
Jesse Romero	14th
Veronica Cili	14th
Ailsa von Dobeneck	15th
Dan Collado	16th
Justin Banister	17th
Darah Carattini	18th
Brianna Watson	19th



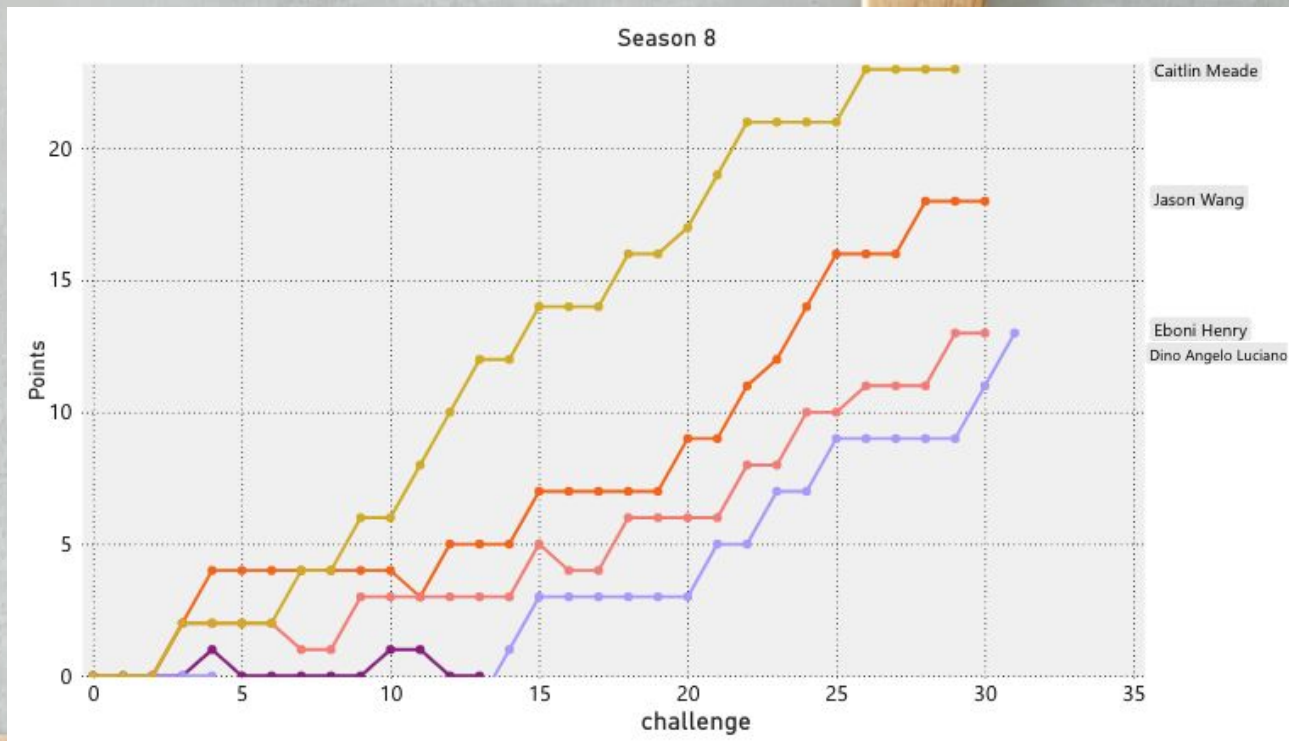
Exploratory Data Analysis: Season 7

Name	Status
Shaun O'Neale	1st
Brandi Mudd	2nd
David Williams	2nd
Tanorria Askew	3rd
Daniel Paustian	3rd
Katie Dixon	4th
Nathan Barnhouse	4th
Eric Howard	5th
Terrance Mueller	5th
Diamond Alexander	6th
Andrea Galan	7th
Alejandro Toro	8th
D'Andre Balaoing	9th
Diana Bilow	9th
Manny Washington	10th
Lisa-Ann Marchesi	11th
Barbara Savage	12th
Brittany Craig	12th
Bill Travers	14th
Cassie Peterson	14th



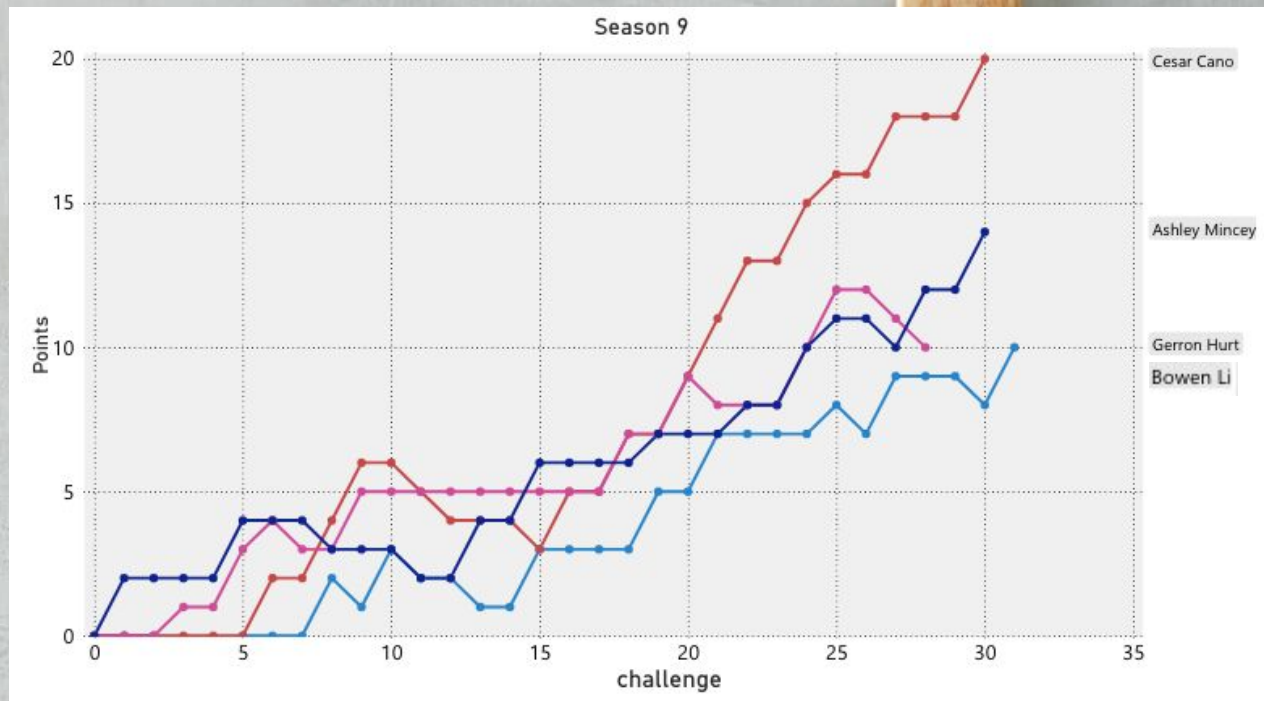
Exploratory Data Analysis: Season 8

Name	Status
Dino Angelo Luciano	1st
Eboni Henry	2nd
Jason Wang	2nd
Caitlin Meade	3rd
Jeff Philbin	3rd
Yachecia Holston	3rd
Gabriel Lewis	4th
Daniel Pontes-Macedo	5th
Caitlin Jones	5th
Adam Wong	6th
Jenny Cavellier	6th
Mike Newton	7th
Reba Billingsley	8th
Brien O'Brien	9th
Necco Ceresani	10th
Jennifer Williams	11th
Sam Reiff-Pasarew	12th
Heather Dombrosky	13th
Paige Jimenez	14th
Mark Togni	15th



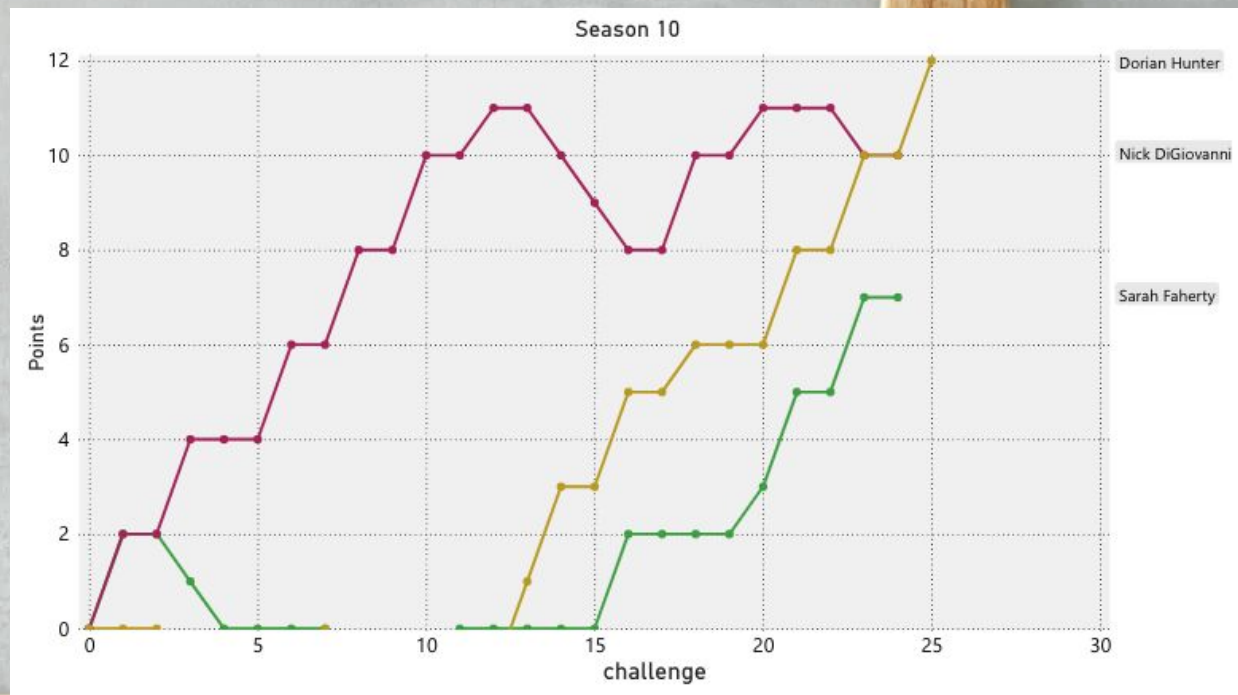
Exploratory Data Analysis: Season 9

Name	Status
Gerron Hurt	1st
Ashley Mincey	2nd
Cesar Cano	2nd
Samantha Daily	3rd
Bowen Li	3rd
Farhan Momin	4th
Julia Danno	5th
Shanika Patterson	5th
Taylor Waltmon	6th
Emily Hallock	6th
Chelsea Sargent	7th
Seung Joo Yun	7th
Ralph Xavier Degala	8th
Mark Ingraham	9th
Ryan Cortez	10th
Lindsay Haigh	11th
Matthew Houck	11th
Juni Cuevas	12th
Alecia Winters	13th
Darrick Krause	14th
Olusola Ogbomo	15th



Exploratory Data Analysis: Season 10

Name	Status
Dorian Hunter	1st
Sarah Faherty	2nd
Nick DiGiovanni	3rd
Noah Sims	4th
Shari Mukherjee	5th
Subha Ramiah	5th
Micah Yaroch	6th
Brielle Baker	7th
Jamie Hough	8th
Fred Chang	9th
Wuta Onda	10th
Renee Rice	11th
Samuel Haaz	12th
Keturah King	13th
Elizabeth Linn	14th
Michael Silverstein	14th
Evan Tesiny	15th
Kimberly White	16th
Deanna Colon	17th
Kenneth Palazzolo	17th



Predicting the Winner

- Decision Tree Classifier
- Ran two models
 - FOX system
 - Point system

contestant_id	name	age	home_state	status	season	num_wins	num_tops	num_bottom	num_safe	
51	Luca Manfè	31	NY		1	4	10	2	2	16
52	Natasha Crnjac	27	CA		2	4	13	2	2	14
53	Jessica "Jessie"	27	GA		3	4	10	4	4	12
54	Krissi Biasiello	34	PA		3	4	3	2	2	20
55	James Nelson	26	TX		4	4	5	1	1	17
56	Brianna "Bri" Ko	22	PA		5	4	5	0	0	13
57	Jordan Roots	29	MA		6	4	2	2	2	17
58	Eddie Jackson	32	GA		7	4	7	1	1	10
59	Bethy Rossos	28	OR		8	4	5	0	0	9
60	Savannah Sturge	27	CA		9	4	3	1	1	8
61	Lynn Chyi	27	CA		9	4	4	0	0	7
62	Jonathan "Jonny"	28	MA		10	4	1	1	1	6
63	Elizabeth "Beth"	29	TN		10	4	3	1	1	3
64	Albaya "Bime" C	35	MA		11	4	2	2	2	4
65	Howard Simpson	26	CA		11	4	1	0	0	4
66	Kathleen "Kathy"	29	NY		12	4	0	0	0	2
67	Malcolm Green	27	MA		13	4	1	0	0	1
68	Adriana Guillen	26	NY		13	4	0	0	0	0
69	Sasha Foxx	42	AL		14	4	0	0	0	0

Predicting the Winner

- Decision Tree Classifier
- Ran two models
 - FOX system
 - Point system

FOX Accuracy Score: % 14.89

Point Accuracy score: % 17.02



Recommendations

- More attributes
 - cooking background
 - Hobbies
 - Professions
 - Personality traits
- Team challenges protect weak contestants
- Data should be gathered during the competition for live evaluation



Risks/ Benefits

Risks

- Viewership could lower faster
- Less dramatic television

Benefits

- An honest competition
- A change from normal programming
- Viewership may increase



Conclusion

- Both Predictive models were too low to be counted as accurate
- More variables need to be taken into account
- Each episode must have feedback data extracted from the judges.

