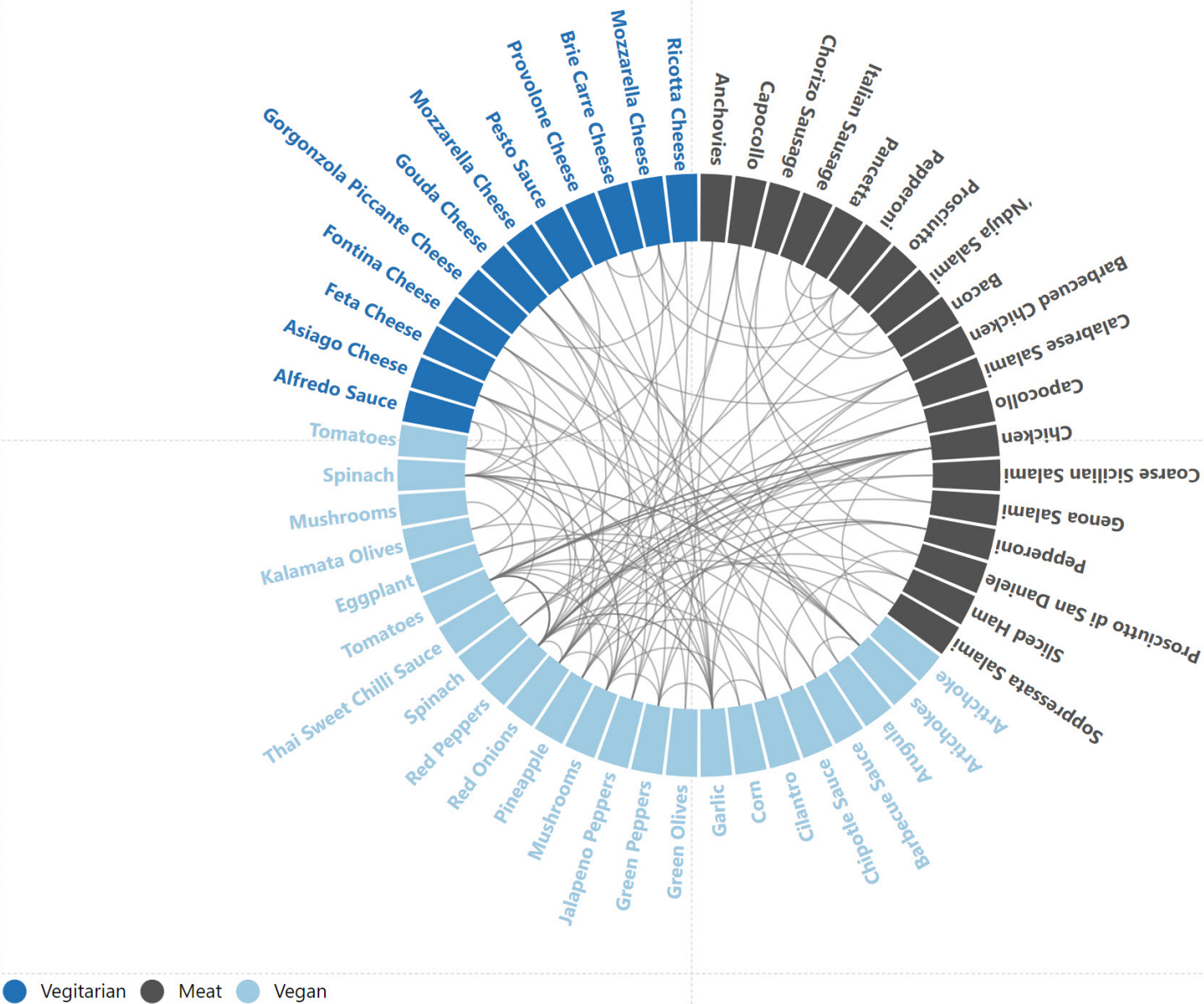
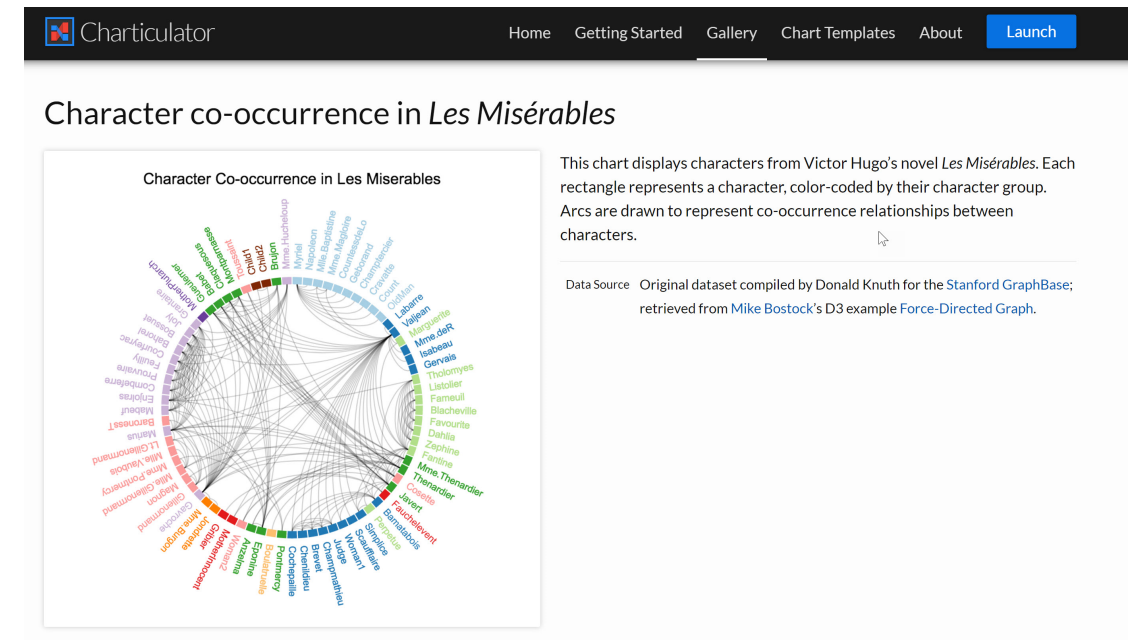
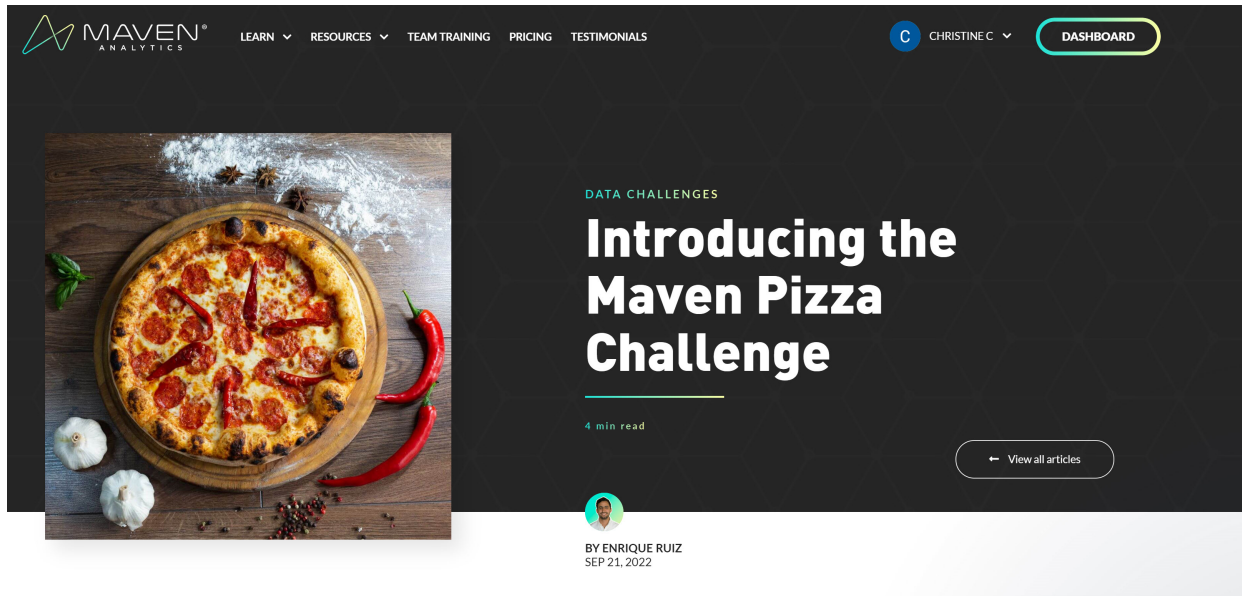


# Pizza Topping Combinations





These are the steps I used to take the Maven Pizza Challenge Data and create a chart using Charticularator similar to their sample Chartacter co-occurence in Les Miserables radial network diagram.

- Download data from <https://www.mavenanalytics.io/blog/maven-pizza-challenge>  
<https://www.mavenanalytics.io/data-playground>  
 There are 4 data files and 1 data dictionary, but for this you only need to "Pizza Types" CSV
- Open in Excel and split the ingredients field using ","

AutoSave

FileHomeInsertPage LayoutFormulasDataReviewViewHelpPower Pivot

Get Data

From Text/CSVRecent Sources

From WebExisting Connections

From Table/Range

Queries & Connections

RefreshAll

PropertiesEdit Links

Organization

Stocks

Sort

Filter

Advanced

Text to Columns

Data tools

What-If Analysis

Forecast Sheet

Group

Ungroup

Subtotal

CommentsShare

Ingredients

	A	B	C	D	E	F	G	H	I	J	K	L
1	pizza_type	name	category	ingredients								
2	bbq_ckn	The Barbec	Chicken	Barbecued Chicken, Red Peppers, Green Peppers, Tomatoes, Red Onions, Barbecue Sauce								
3	cali_ckn	The Califor	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno Peppers, Fontina Cheese, Gouda Cheese								
4	ckn_alfred	The Chicke	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms, Asiago Cheese, Alfredo Sauce								
5	ckn_pesto	The Chicke	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garlic, Pesto Sauce								
6	southw_ck	The South	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions, Jalapeno Peppers, Corn, Cilantro, Chipotle Sauce								
7	thai_ckn	The Thai Cl	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, Thai Sweet Chilli Sauce								
8	big_meat	The Big Me	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sausage								
9	classic_dlx	The Classic	Classic	Pepperoni, Mushrooms, Red Onions, Red Peppers, Bacon								
10	hawaiian	The Hawaii	Classic	Sliced Ham, Pineapple, Mozzarella Cheese								
11	ital_cpello	The Italian	Classic	Capocollo, Red Peppers, Tomatoes, Goat Cheese, Garlic, Oregano								
12	napolitana	The Napoli	Classic	Tomatoes, Anchovies, Green Olives, Red Onions, Garlic								
13	pep_msh_lj	The Pepper	Classic	Pepperoni, Mushrooms, Green Peppers								
14	pepperoni	The Pepper	Classic	Mozzarella Cheese, Pepperoni								
15	the_greek	The Greek	Classic	Kalamata Olives, Feta Cheese, Tomatoes, Garlic, Beef Chuck Roast, Red Onions								
16	brie_carre	The Brie C	Supreme	Brie Carre Cheese, Prosciutto, Caramelized Onions, Pears, Thyme, Garlic								
17	calabrese	The Calabr	Supreme	'Nduja Salami, Pancetta, Tomatoes, Red Onions, Friggitello Peppers, Garlic								
18	ital_supr	The Italian	Supreme	Calabrese Salami, Capocollo, Tomatoes, Red Onions, Green Olives, Garlic								
19	peppr_sala	The Pepper	Supreme	Genoa Salami, Capocollo, Pepperoni, Tomatoes, Asiago Cheese, Garlic								
20	prsc_argla	The Proscit	Supreme	Prosciutto di San Daniele, Arugula, Mozzarella Cheese								
21	sicilian	The Sicilian	Supreme	Coarse Sicilian Salami, Tomatoes, Green Olives, Luganega Sausage, Onions, Garlic								
22	soppressat	The Soppre	Supreme	Soppressata Salami, Fontina Cheese, Mozzarella Cheese, Mushrooms, Garlic								
23	spicy_ital	The Spicy I	Supreme	Capocollo, Tomatoes, Goat Cheese, Artichokes, Pepperoncini verdi, Garlic								
24	spinach_su	The Spinac	Supreme	Spinach, Red Onions, Pepperoni, Tomatoes, Artichokes, Kalamata Olives, Garlic, Asiago Cheese								
25	five_chees	The Five C	Veggie	Mozzarella Cheese, Provolone Cheese, Smoked Gouda Cheese, Romano Cheese, Blue Cheese, Garlic								
26	four_chees	The Four C	Veggie	Ricotta Cheese, Gorgonzola Piccante Cheese, Mozzarella Cheese, Parmigiano Reggiano Cheese, Garlic								
27	green_garc	The Green	Veggie	Spinach, Mushrooms, Tomatoes, Green Olives, Feta Cheese								
28	ital_veggie	The Italian	Veggie	Eggplant, Artichokes, Tomatoes, Zucchini, Red Peppers, Garlic, Pesto Sauce								
29	mediterrar	The Medite	Veggie	Spinach, Artichokes, Kalamata Olives, Sun-dried Tomatoes, Feta Cheese, Plum Tomatoes, Red Onions								
30	mexicana	The Mexici	Veggie	Tomatoes, Red Peppers, Jalapeno Peppers, Red Onions, Cilantro, Corn, Chipotle Sauce, Garlic								
31	spin_pesto	The Spinac	Veggie	Spinach, Artichokes, Tomatoes, Sun-dried Tomatoes, Garlic, Pesto Sauce								
32	spinach_fe	The Spinac	Veggie	Spinach, Mushrooms, Red Onions, Feta Cheese, Garlic								
33	veggie_veg	The Vegeta	Veggie	Mushrooms, Tomatoes, Red Peppers, Green Peppers, Red Onions, Zucchini, Spinach, Garlic								
34												

Convert Text to Columns Wizard - Step 1 of 3

The Text Wizard has determined that your data is Delimited.

If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

☒ Delimited - Characters such as commas or tabs separate each field.

☐ Fixed width - Fields are aligned in columns with spaces between each field.

Preview of selected data:

1 ingredients

2 Barbecued Chicken, Red Peppers, Green Peppers, Tomatoes, Red Onions, Barbe

3 Chicken, Artichoke, Spinach, Garlic, Jalapeno Peppers, Fontina Cheese, Gou

4 Chicken, Red Onions, Red Peppers, Mushrooms, Asiago Cheese, Alfredo Sauce

5 Chicken, Tomatoes, Red Peppers, Spinach, Garlic, Pesto Sauce

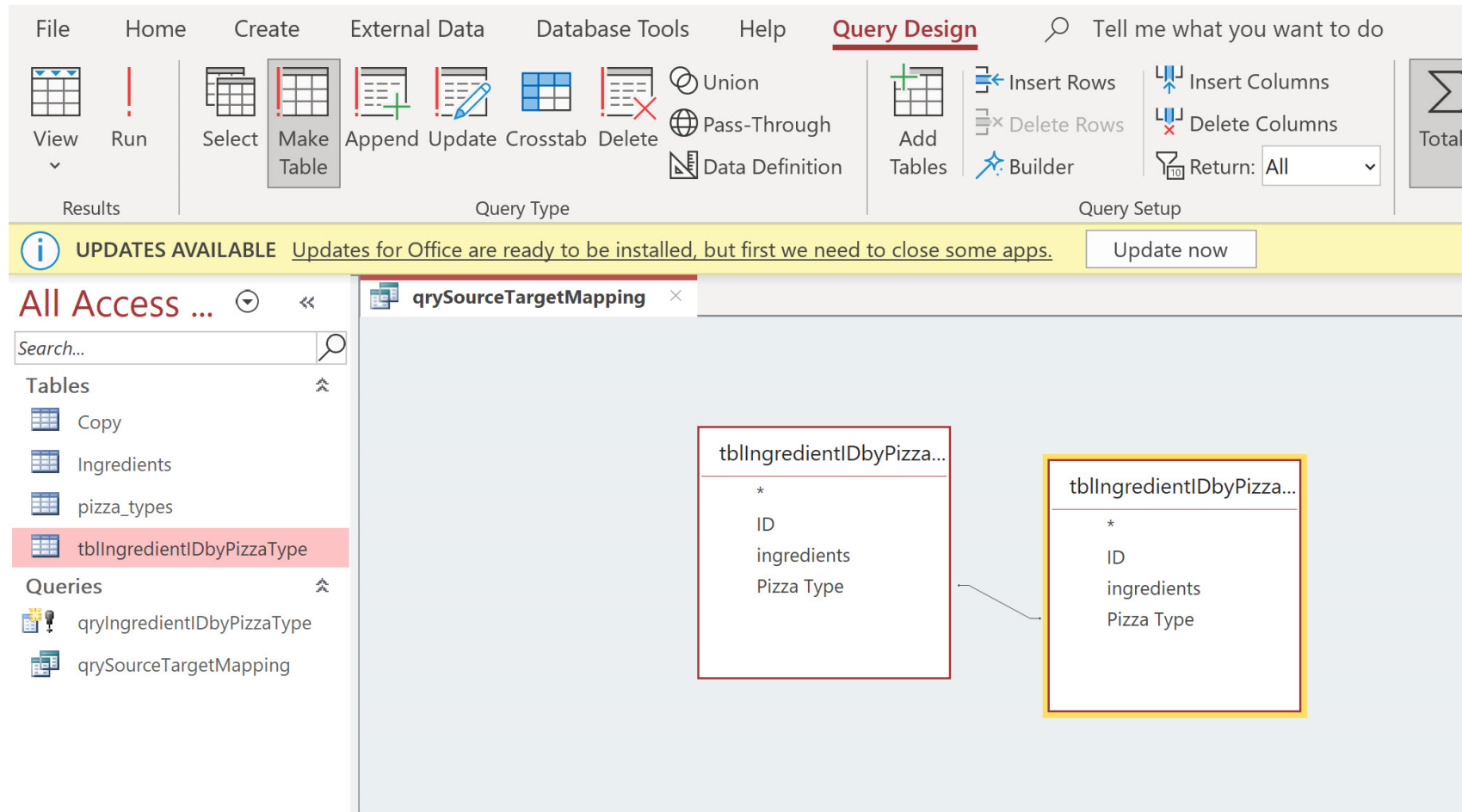
6 Chicken, Tomatoes, Red Peppers, Red Onions, Jalapeno Peppers, Corn, Cilant

7 Chicken, Pineapple, Tomatoes, Red Peppers, Thai Sweet Chilli Sauce

Cancel< BackNext >Finish

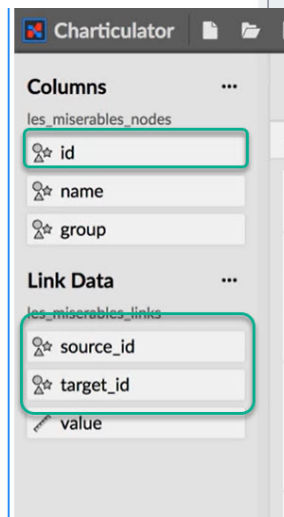
	A	B	C	D	E	F	G	H	I	J	K	L
1	pizza_type	name	category	ingredients								
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3	cali_ckn	The Califor	Chicken	Chicken	Artichoke	Spinach	Garlic	Jalapeno P	Fontina Ch	Gouda Cheese		
4	ckn_alfred	The Chicke	Chicken	Chicken	Red Onion	Red Peppe	Mushroom	Asiago Che	Alfredo Sauce			
5	ckn_pesto	The Chicke	Chicken	Chicken	Tomatoes	Red Peppe	Spinach	Garlic	Pesto Sauce			
6	southw_ck	The South	Chicken	Chicken	Tomatoes	Red Peppe	Red Onion	Jalapeno P	Corn	Cilantro	Chipotle Sauce	
7	thai_ckn	The Thai Cl	Chicken	Chicken	Pineapple	Tomatoes	Red Peppe	Thai Sweet	Chilli Sauce			
8	big_meat	The Big Me	Classic	Bacon	Pepperoni	Italian Sau	Chorizo Sausage					
9	classic_dlx	The Classic	Classic	Pepperoni	Mushroom	Red Onion	Red Peppe	Bacon				
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14	pepperoni	The Pepper	Classic	Mozzarella	Pepperoni							
15	the_greek	The Greek	Classic	Kalamata C	Feta Chee	Tomatoes	Garlic	Beef Chuc	Red Onions			
16	brie_carre	The Brie C	Supreme	Brie Carre	Prosciutto	Carameliz	Pears	Thyme	Garlic			
17	calabrese	The Calabr	Supreme	'Nduja Sala	Pancetta	Tomatoes	Red Onion	Friggitello	Garlic			
18	ital_supr	The Italian	Supreme	Calabrese S	Capocollo	Tomatoes	Red Onion	Green Oliv	Garlic			
19	peppr_sala	The Pepper	Supreme	Genoa Sala	Capocollo	Pepperoni	Tomatoes	Asiago Che	Garlic			
20	prsc_argla	The Proscit	Supreme	Prosciutto	Arugula	Mozzarella	Cheese					
21	sicilian	The Sicilian	Supreme	Coarse Sici	Tomatoes	Green Oliv	Luganega	Onions	Garlic			
22	soppressat	The Soppre	Supreme	Soppressat	Fontina Ch	Mozzarella	Mushroom	Garlic				
23	spicy_ital	The Spicy I	Supreme	Capocollo	Tomatoes	Goat Chee	Artichokes	Peperonci	Garlic			
24	spinach_su	The Spinac	Supreme	Spinach	Red Onion	Pepperoni	Tomatoes	Artichokes	Kalamata	Garlic	Asiago Cheese	
25	five_chees	The Five C	Veggie	Mozzarella	Provolone	Smoked G	Romano C	Blue Chee	Garlic			
26	four_chees	The Four C	Veggie	Ricotta Che	Gorgonzol	Mozzarella	Parmigian	Garlic				
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30	mexicana	The Mexici	Veggie	Tomatoes	Red Peppe	Jalapeno P	Red Onion	Cilantro	Corn	Chipotle S	Garlic	
31	spin_pesto	The Spinac	Veggie	Spinach	Artichokes	Tomatoes	Sun-dried	Garlic	Pesto Sauce			
32	spinach_fe	The Spinac	Veggie	Spinach	Mushroom	Red Onion	Feta Chee	Garlic				
33	veggie_veg	The Vegeta	Veggie	Mushroom	Tomatoes	Red Peppe	Green Pep	Red Onion	Zucchini	Spinach	Garlic	
34	bbq_ckn	The Barbec	Chicken	Red Peppers								





The screenshot shows two Excel spreadsheets. The left spreadsheet, titled 'Columns for', has columns A, B, and C. It contains a list of ingredients with their IDs and groups. The right spreadsheet, titled 'SourceTarget...', has columns A, B, and C. It contains a table with columns 'source\_id', 'target\_id', and 'value'. A green box highlights the 'source\_id' and 'target\_id' columns with the text: 'These exact tables are required for drawing the link lines'.

source_id	target_id	value
1	31	1
2	43	1
3	14	1
4	53	1
5	26	1
6	53	1
7	10	1
8	49	1
9	4	1
10	7	1
11	43	1
12	30	1
13	53	1
14	4	1
15	6	1
16	43	1
17	30	1
18	39	1
19	31	1
20	44	1



The hardest part of this for me was thinking about how I was going to get a list of all the ingredients that get used together for the source\_id and target\_id format required to draw the connection lines in Charticular. -- I did this by creating a Key field for each ingredient and then joining the unique list of ingredients by Pizza type to itself on Pizza Type -- which creates the new records you need.

It turns out the fields need to be labeled exactly as shown to or it won't recognize how to draw lines