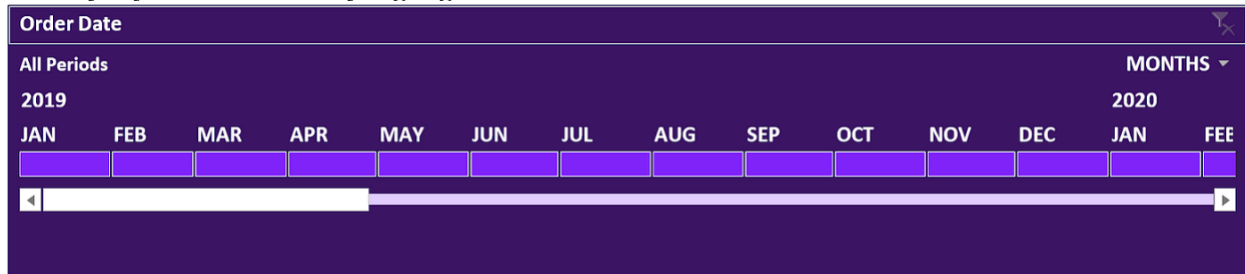
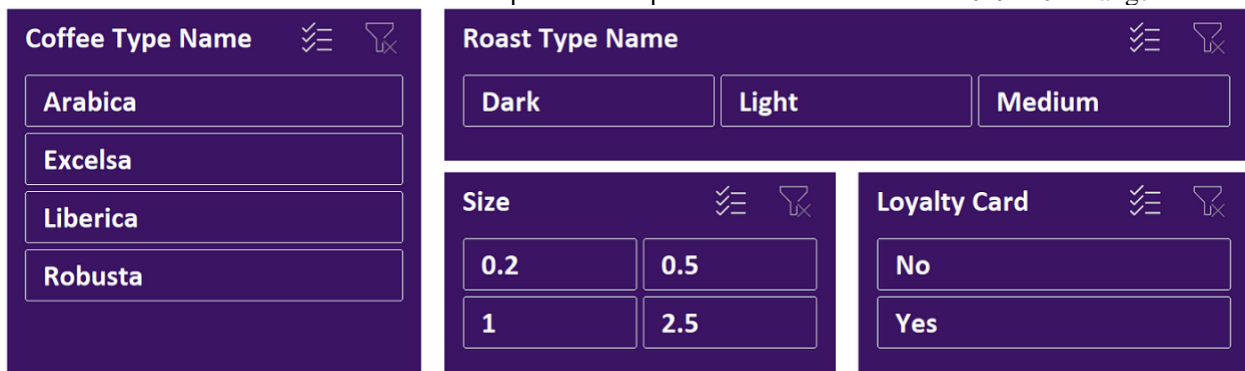


Coffee Sales Data Dashboard Building

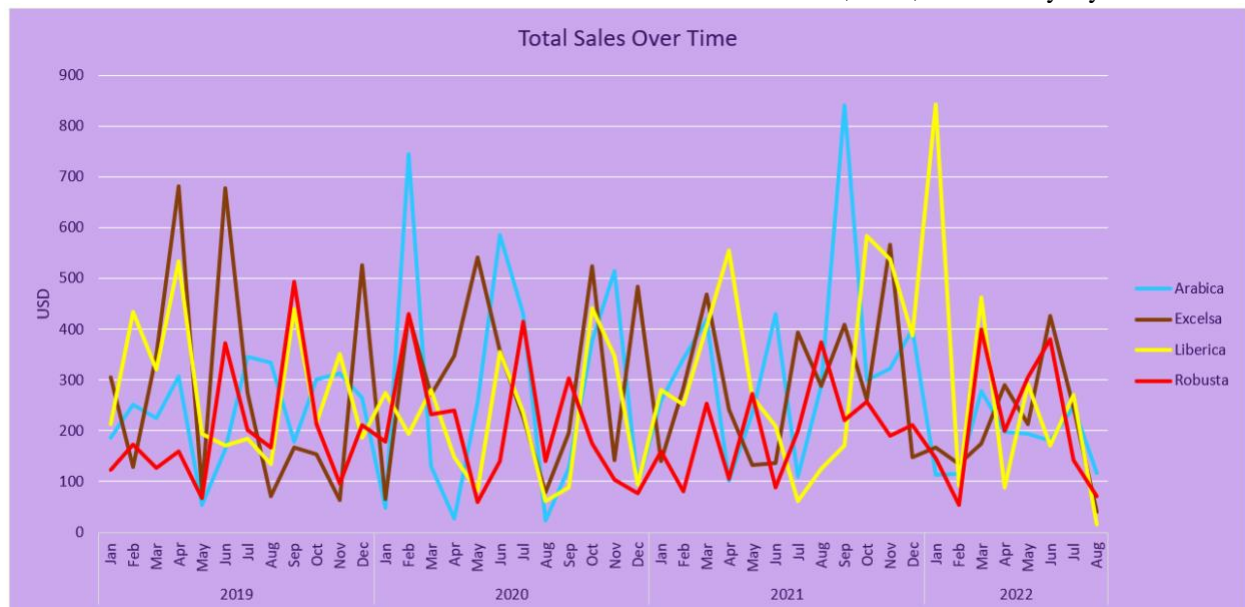
The Coffee Sales dashboard consists of 3 reactive graphs and 5 customizable slicers, which enables the user to filter results and find the sales data based on specific dates, Coffee types, Roast Types, Sizes, and Loyalty. Below I'll briefly highlight this dashboard's features.



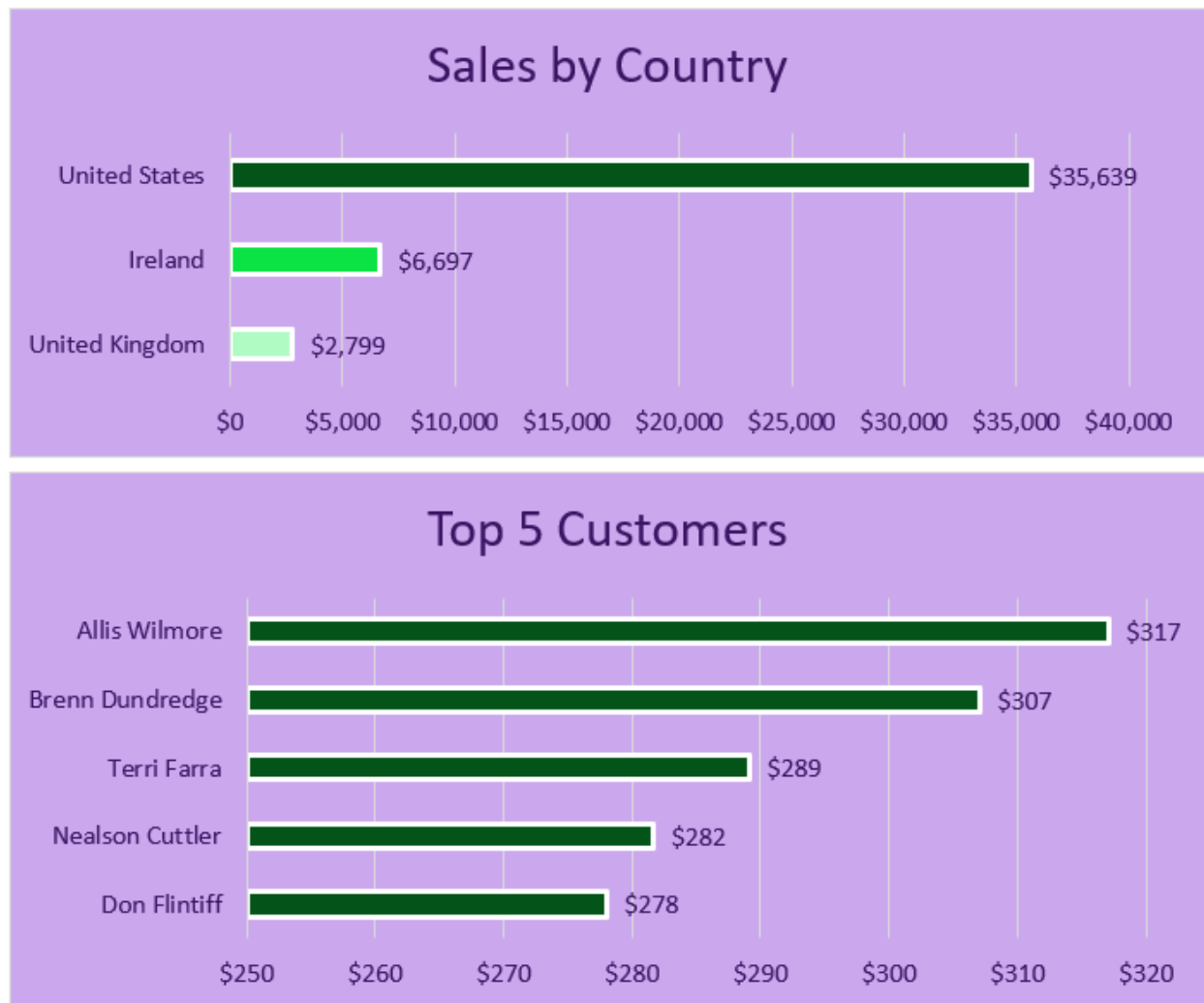
The timeline allows users to select specific time periods between the data's 2019–2022 range



These four slicers allow users to filter results based on Coffee, roast, size and loyalty



The main graph displays sales of selected coffee types over the selected time period



These side graphs display sales by country and the top 5 customers

These are the steps I took to create this interactive dashboard:

1. Downloaded the data and opened it in Excel: I located the `xlsx` file on the GitHub repository that Mo shared, downloaded it, and opened it in Excel — pretty straightforward!

2. XLOOKUP to fill in several columns from related tables: The `xlsx` file had three sheets; orders, customers, and products. To create this dashboard I needed all relevant information on one

sheet. I started with the orders sheet and used XLOOKUP to fill in data from the customer sheet, including Name, Email and Country.

SUM ▾ : ✖ ✔ *fx* =XLOOKUP(C2,customers!\$A\$1:\$A\$1001,customers!\$B\$1:\$B\$1001,,0)

	A	B	C	D	E	F
1	Order ID	Order Date	Customer ID	Product ID	Quantity	Customer Name
2	QEV-37451-860	9/5/2019	17670-51384-MA	R-M-1	2	\$B\$1001,,0)
3	QEV-37451-860	9/5/2019	17670-51384-MA	E-M-0.5	5	
4	FAA-43335-268	6/17/2021	21125-22134-PX	A-L-1	1	
5	KAC-83089-793	7/15/2021	23806-46781-OU	E-M-1	2	
6	KAC-83089-793	7/15/2021	23806-46781-OU	R-L-2.5	2	
7	CVP-18956-553	8/4/2021	86561-91660-RB	L-D-1	3	
8	IPP-31994-879	1/21/2022	65223-29612-CB	E-D-0.5	3	
9	SNZ-65340-705	5/20/2022	21134-81676-FR	L-L-0.2	1	
10	EZT-46571-659	1/2/2019	03396-68805-ZC	R-M-0.5	3	

Formula to fill the Customer Name column

The syntax for XLOOKUP is as follows: =XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode]). This was my input to fill in the **names** column:

=XLOOKUP(C2,customers!\$A\$2:\$A\$1001,customers!\$B\$2:\$B\$1001,,0).

SUM ▾ : ✖ ✔ *fx* =IF(XLOOKUP(C2,customers!\$A\$2:\$A\$1001,customers!\$C\$2:\$C\$1001,,0)="",XLOOKUP(C2,customers!\$A\$2:\$A\$1001,customers!\$C\$2:\$C\$1001,,))

	A	B	C	D	E	F	G	H	I	J
1	Order ID	Order Date	Customer ID	Product ID	Quantity	Customer Name	Email	Country	Coffee Type	Roast
2	QEV-37451-860	9/5/2019	17670-51384-MA	R-M-1	2	Aloisia Allner	\$C\$1001,,))			
3	QEV-37451-860	9/5/2019	17670-51384-MA	E-M-0.5	5	Aloisia Allner				
4	FAA-43335-268	6/17/2021	21125-22134-PX	A-L-1	1	Jami Redholes				
5	KAC-83089-793	7/15/2021	23806-46781-OU	E-M-1	2	Christoffer O' Shea				
6	KAC-83089-793	7/15/2021	23806-46781-OU	R-L-2.5	2	Christoffer O' Shea				
7	CVP-18956-553	8/4/2021	86561-91660-RB	L-D-1	3	Beryle Cottier				
8	IPP-31994-879	1/21/2022	65223-29612-CB	E-D-0.5	3	Shaylynn Lobe				
9	SNZ-65340-705	5/20/2022	21134-81676-FR	L-L-0.2	1	Melvin Wharfe				
10	EZT-46571-659	1/2/2019	03396-68805-ZC	R-M-0.5	3	Guthrey Petracci				
11	NWQ-70061-912	9/5/2019	61021-27840-ZN	R-M-0.5	1	Rodger Raven				
12	BKK-47233-845	3/8/2021	76239-90137-UQ	A-D-1	4	Ferrell Ferber				
13	VQR-01002-970	10/28/2020	49315-21985-BB	E-L-2.5	5	Duky Phizackerly				
14	SZW-48378-399	7/2/2022	34136-36674-OM	R-M-1	5	Rosaleen Scholar				
15	ITA-87418-783	5/22/2020	39396-12890-PE	R-D-2.5	2	Terence Vanyutin				
16	GNZ-46006-527	4/5/2022	95875-73336-RG	L-D-0.2	3	Patrice Troha				

Formula to fill the Email column

When I tried this for the **emails** column, I found that the cells that did not contain email addresses appeared with a zero in them. To avoid this, I created a simple IF statement that returned a blank cell for those cells without emails. Although the input looks complicated all it means is that if the value is

o, then I want nothing (“”), otherwise, I want the value.

=IF(XLOOKUP(C2,customers!\$A\$2:\$A\$1001,customers!\$C\$2:\$C\$1001,,o)=o,“”,XLOOKUP(C2,customers!\$A\$2:\$A\$1001,customers!\$C\$2:\$C\$1001,,))

The **countries** column was very similar to the names column:

=XLOOKUP(C2,customers!\$A\$1:\$A\$1001,customers!\$G\$1:\$G\$1001,,o).

3. INDEX + MATCH to fill in information dynamically: To avoid the hassle of inputting the same function repeatedly again, I used the index match function to fill in data from my products table.

I2 : X ✓ fx =INDEX(products!A1:products!\$A\$1:\$G\$49,MATCH(orders!\$D2,products!\$A\$1:\$A\$49,0),MATCH(I\$1,products!\$A\$1:\$G\$1,0))

	F	G	H	I	J	K	L	M
1	Customer Name	Email	Country	Coffee Type	Roast Type	Size	Unit Price	
2	Isia Allner	aallner0@lulu.com	United States	Rob	M	1	9.95	
3	Isia Allner	aallner0@lulu.com	United States					
4	Ini Redholes	jredholes2@tmall.com	United States					
5	Ristoffer O' Shea		Ireland					
6	Ristoffer O' Shea		Ireland					
7	Ryle Cottier		United States					
8	aylynn Lobe	slobe6@nifty.com	United States					
9	elvin Wharfe		Ireland					
10	threy Petracci	gpetracci8@livejournal.com	United States					
11	dger Raven	rraven9@ed.gov	United States					
12	rell Ferber	fferbera@businesswire.com	United States					
13	ky Phizackerly	dphizackerlyb@utexas.edu	United States					

Formula to fill the product information columns

Inside the Index function, I used the MATCH function to match the row and column and row number

=INDEX(products!A1:products!\$A\$1:\$G\$49,MATCH(orders!\$D2,products!\$A\$1:\$A\$49,0),MATCH(I\$1,products!\$A\$1:\$G\$1,0))

4. Multiplication formula for Sales column: =To create a column for sales I simply multiplied price and quantity =L2*E2

5. IF statement to enhance value format: = I wanted to see the full names of the Coffee Types so I started a new column (Coffee Type Name) and created an IF statement as seen here.

=IF(I2="Rob","Robusta",IF(I2="Exc","Excelsa",IF(I2="Ara","Arabica",IF(I2="Lib","Liberica"))))

I created a similar column and IF statement for Roast Types:

=IF(J2="M","Medium",IF(J2="L","Light",IF(J2="D","Dark")))

6. Formatted Dates and Currency: I changed the dates format to dd-mmm-yyyy, which replaced month number with three letter abbreviations. I also formatted the currency to USD.

7. Checked For Duplicates: While cleaning would usually be a large part of this process, this particular dataset was already in good condition. I did use the remove duplicates feature to check and there were none found.

8. Convert Range to Table: In order to have any changes I make to the dataset populate more easily to my pivot tables, I converted the range into a table.

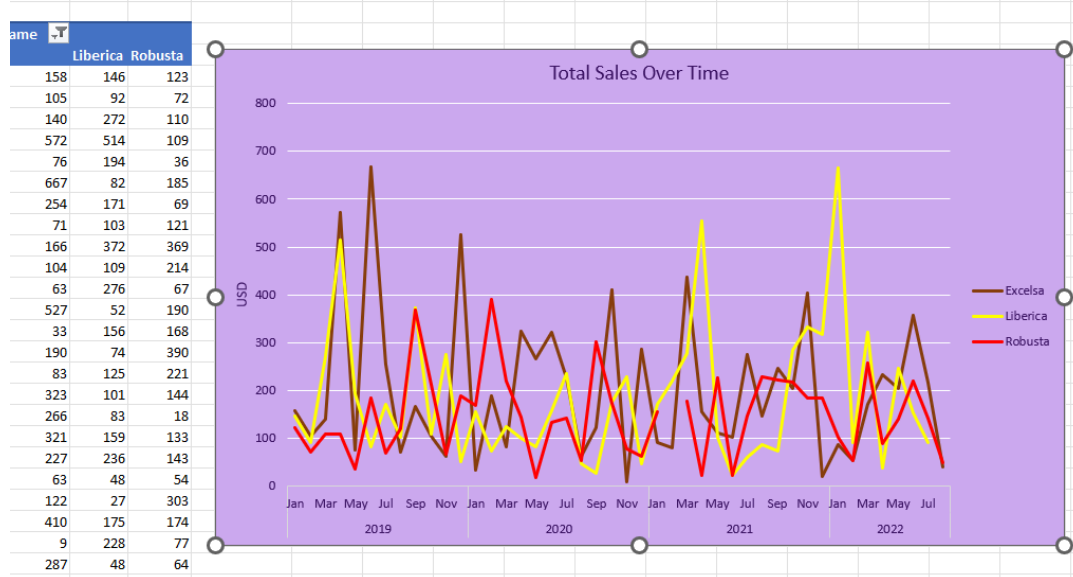
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Order ID	Order Date	Customer ID	Product ID	Quantity	Customer Name	Email	Country	Coffee Type	Roast Type	Size	Unit Price	Sales	Coffee Type Name	Roast Type Name	Loyalty Card	
DEV-37451-480	5-Sep-2019	17670-51384-MA	R-M-1	2	Aloisia Allner	aallner@lulu.com	United States	Rob	M	1	\$ 9.95	\$ 19.90	Robusta	Medium	Yes	
DEV-37451-480	5-Sep-2019	17670-51384-MA	R-M-0.5	5	Aloisia Allner	aallner@lulu.com	United States	Exc	M	0.5	\$ 8.25	\$ 41.25	Excelsa	Medium	Yes	
FAA-43335-268	17-Jun-2021	21125-22134-PX	A-L-1	1	Jami Redholes	jredholes1@gmail.com	United States	Ara	L	1	\$ 12.95	\$ 12.95	Arabica	Light	Yes	
KAC-83089-793	19-Jul-2021	23806-46781-OU	R-M-1	2	Christoffer O' Shea		Ireland	Exc	M	1	\$ 19.75	\$ 27.50	Excelsa	Medium	No	
KAC-83089-793	19-Jul-2021	23806-46781-OU	R-L-0.5	2	Christoffer O' Shea		Ireland	Rob	L	2.5	\$ 27.49	\$ 54.97	Robusta	Light	No	
CVP-18956-553	4-Aug-2021	18561-91650-HB	L-D-1	3	Renee Geller		United States	Lib	D	1	\$ 12.95	\$ 38.85	Liberica	Dark	No	
IFP-31994-879	21-Jan-2022	65223-29612-CB	R-D-0.5	3	Shaylynn Lobe	stobes@nifty.com	United States	Exc	D	0.5	\$ 7.20	\$ 21.87	Excelsa	Dark	Yes	
SNZ-65340-705	20-May-2022	21134-81676-FR	L-L-0.2	1	Melvin Wharfe		Ireland	Lib	L	0.2	\$ 4.76	\$ 4.76	Liberica	Light	Yes	
ITZ-46571-659	2-Jan-2019	03396-68805-ZC	R-M-0.5	3	Guthrey Petracci	gpetracci@livejournal.com	United States	Rob	M	0.5	\$ 5.97	\$ 17.91	Robusta	Medium	No	
HWQ-72061-912	5-Sep-2019	61021-27840-ZN	R-M-0.5	1	Rodger Raven	ravenr@ed.gov	United States	Rob	M	0.5	\$ 5.97	\$ 5.97	Robusta	Medium	No	
BKK-47233-845	8-Mar-2021	76239-90137-UQ	A-D-1	4	Ferrell Ferber	fferbera@businessvine.com	United States	Ara	D	1	\$ 9.95	\$ 39.80	Arabica	Dark	No	
VQR-01002-970	28-Oct-2020	49315-21985-BB	E-L-2.5	5	Duty Phizackerly	dphizackerly@utexas.edu	United States	Exc	L	2.5	\$ 34.16	\$ 170.78	Excelsa	Light	Yes	
5ZW-48378-399	2-Jul-2022	34136-36674-OM	R-M-1	5	Rosaleen Scholar	rscholar@myu.edu	United States	Rob	M	1	\$ 9.95	\$ 49.75	Robusta	Medium	No	
ITA-87418-783	22-May-2020	30990-21890-PE	R-D-1.5	2	Terence Vanvutin	tvannutin@uicn.com	United States	Rob	D	2.5	\$ 20.59	\$ 41.17	Robusta	Dark	No	
GNZ-46006-527	5-Apr-2022	25875-73336-RG	L-D-0.2	3	Patrice Trobe	ptrobe@vunderground.com	United States	Lib	D	0.2	\$ 3.89	\$ 11.66	Liberica	Dark	Yes	
PYQ-78248-319	7-Jun-2022	23473-43727-BY	R-M-2.5	5	Livvettlyn Oscroft	loscroft@ebay.co.uk	United States	Rob	M	2.5	\$ 22.89	\$ 114.43	Robusta	Medium	No	
VAU-44387-624	20-Mar-2019	99643-51048-IQ	A-M-0.2	6	Minni Alabaster	malabaster@hexun.com	United States	Ara	M	0.2	\$ 3.38	\$ 20.25	Arabica	Medium	No	
RNW-33159-159	19-Oct-2019	62173-15287-CU	A-L-1	6	Rhianon Brousp	rbrousp@ymdo.com	United States	Ara	L	1	\$ 12.95	\$ 77.70	Arabica	Light	No	
TDZ-59011-311	13-Jun-2019	57931-05932-ST	R-D-3.5	4	Pail Bedford	prefford@nifty	Ireland	Rob	D	3.5	\$ 20.59	\$ 82.34	Robusta	Dark	Yes	
IDU-25793-399	4-Dec-2020	76664-37050-DT	A-M-0.2	5	Aurea Corradino	acorradin@harvard.edu	United States	Ara	M	0.2	\$ 3.38	\$ 16.88	Arabica	Medium	Yes	
IDU-25793-399	4-Dec-2020	76664-37050-DT	E-D-0.2	4	Aurea Corradino	acorradin@harvard.edu	United States	Exc	D	0.2	\$ 3.65	\$ 14.58	Excelsa	Dark	Yes	
NUO-10013-488	4-Dec-2020	05090-86787-BQ	A-D-0.2	6	Arris Davidovsky	adavidovsky@netvibes.com	United States	Ara	D	0.2	\$ 2.99	\$ 17.91	Arabica	Dark	No	
LQU-65630-479	22-Jan-2021	37651-47492-HC	R-M-0.5	4	Annabel Anuk	aanuk@kickstarter.com	United States	Rob	M	2.5	\$ 22.89	\$ 91.54	Robusta	Medium	Yes	
FEQ-11834-332	11-Feb-2022	95399-57205-HI	A-D-0.2	4	Iorgo Kleinert	ikleinert@amazon.co.uk	United States	Ara	D	0.2	\$ 2.99	\$ 11.94	Arabica	Dark	Yes	
TKY-71558-096	15-Sep-2021	24010-66714-HW	A-M-1	1	Chris Blofeld	cblofeld@amazon.co.uk	United States	Ara	M	1	\$ 11.25	\$ 11.25	Arabica	Medium	No	
DAY-65321-253	24-Oct-2020	07591-92789-UA	E-M-0.2	3	Gulley Ferris	gferris@umich.edu	United States	Exc	M	0.2	\$ 4.13	\$ 12.38	Excelsa	Medium	Yes	
DIP-43502-491	20-Feb-2019	49231-44455-IC	A-M-0.5	4	Selene Stales	sshalas@umich.edu	United States	Ara	M	0.5	\$ 6.75	\$ 27.00	Arabica	Medium	Yes	
WAG-26945-689	8-Oct-2019	50121-88608-EQ	A-M-0.2	5	Vivie Dannel	vdannel@nifty.com	Ireland	Ara	M	0.2	\$ 3.38	\$ 16.88	Arabica	Medium	No	
CHE-78995-767	2-Aug-2022	00888-74814-UZ	A-D-0.5	3	Theresita Neubury	tneubury@usda.gov	Ireland	Ara	D	0.5	\$ 5.97	\$ 17.91	Arabica	Dark	No	
IRZ-14638-602	20-Feb-2019	14158-30715-08	A-D-1	4	Moelle Calcutt	mcalcutt@baidu.com	Ireland	Ara	D	1	\$ 9.95	\$ 39.80	Arabica	Dark	Yes	
WQO-36015-429	25-Sep-2021	51427-89175-QJ	L-M-0.2	5	Adrian Swaine		United States	Lib	M	0.2	\$ 4.37	\$ 21.83	Liberica	Medium	No	
WQO-36015-429	25-Sep-2021	51427-89175-QJ	A-D-0.5	6	Adrian Swaine		United States	Ara	D	0.5	\$ 5.97	\$ 35.82	Arabica	Dark	No	
WQO-36015-429	25-Sep-2021	51427-89175-QJ	L-M-0.5	6	Adrian Swaine		United States	Lib	M	0.5	\$ 8.73	\$ 52.38	Liberica	Medium	No	

Range formatted as a table

9. Sale-over-Time Pivot Table + Formatting: To create the first pivot table I clicked insert table and selected the entire orders table.

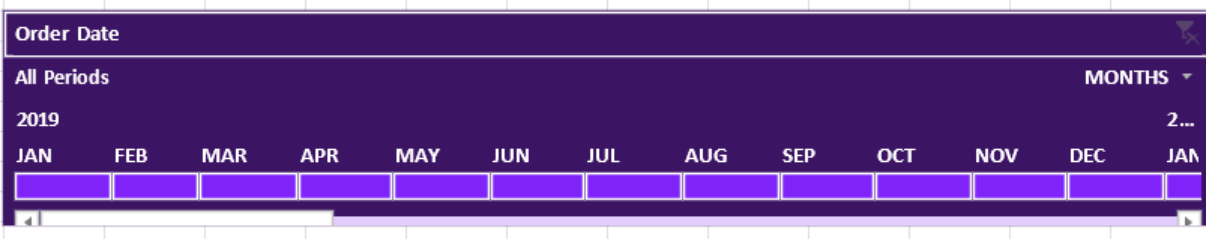
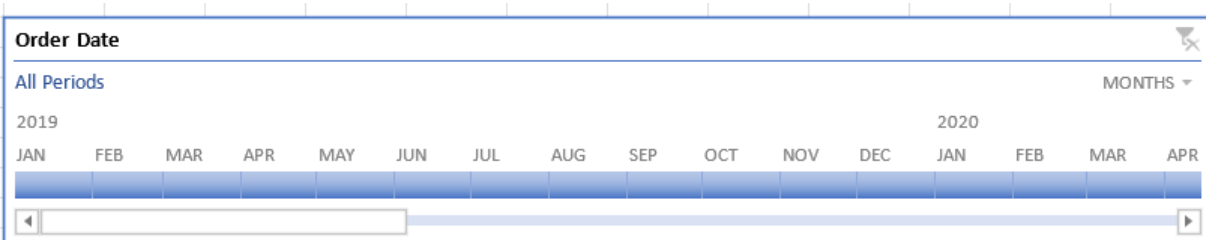
Since I wanted to measure sales of specific coffee types over time, I dragged “Sales” into the value section, “Coffee Type Name” into columns, and “Date” into the rows section. Then I simplified the dates by grouping them by month and year and the sales by rounding the numbers to the nearest whole.

I inserted a line chart and edited colors and axis titles.



10. Insert Timeline + Formatting: I added a date slider and customized it to my liking as well.

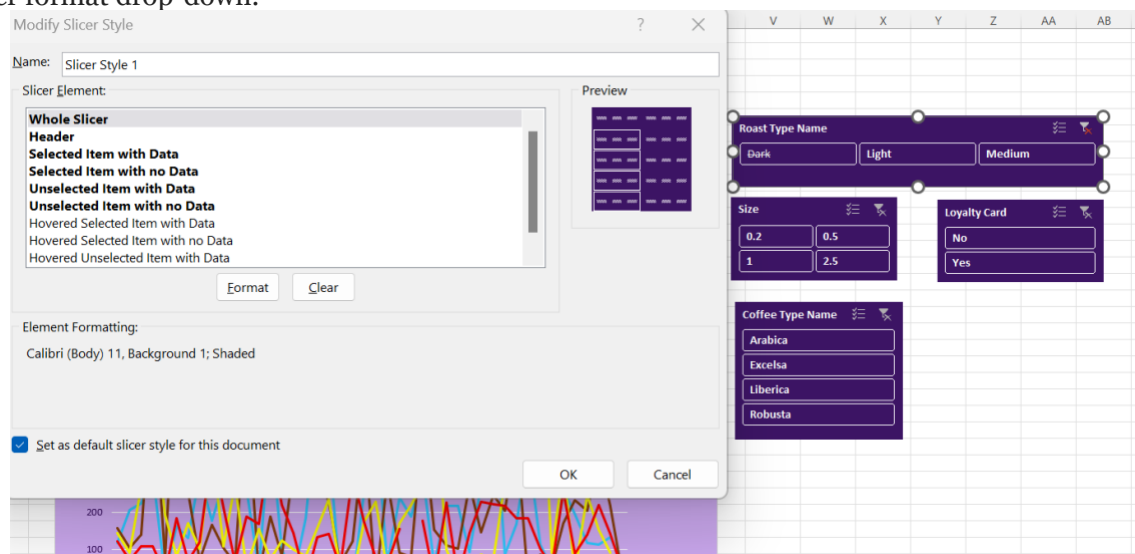
Check out the before and after!



Standard timeline compared to custom format

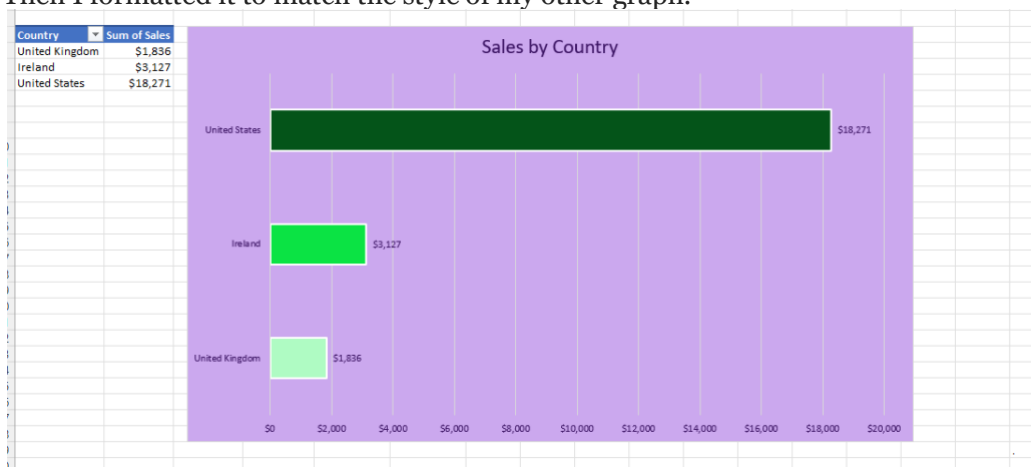
11. Insert Slicers + Formatting: I added slicers for the Coffee Roast Name, Size and Loyalty. In order to add the Loyalty slicer I needed to create a column for it in my Orders table using XLOOKUP on the Customer sheet.

To format the sliders with this design I created my own format, by selecting on at the bottom of the slicer format drop-down.



Custom slicer format

12. Sales per country and Top 5 Customers Pivot Tables: I copied over the sheet from the sales pivot table and modified it by dragging “Country” into rows and leaving “Sales” in the value section. Then I formatted it to match the style of my other graph.



Formatted Sales by Country Graph from the pivot table

I followed the same steps for my Top 5 Customers pivot table, except I put “Customer Name” in the rows section. I also filtered the values to only show the top 5 names.

13. Building the Dashboard: To create the dashboard I copied over my graphs into a new sheet and snapped them to the grid by holding alt as I moved them. I adjusted the height and width of the cells in-between my dashboard elements and then removed the gridlines for a clean look. The results are displayed at the top of this article!

Thanks for reading, see my profile for more Data Analysis projects!