# Introduction to MS Excel(Part-I)

https://github.com/KrishnaMentor/CN-Weekend

# **6** SESSION OBJECTIVES

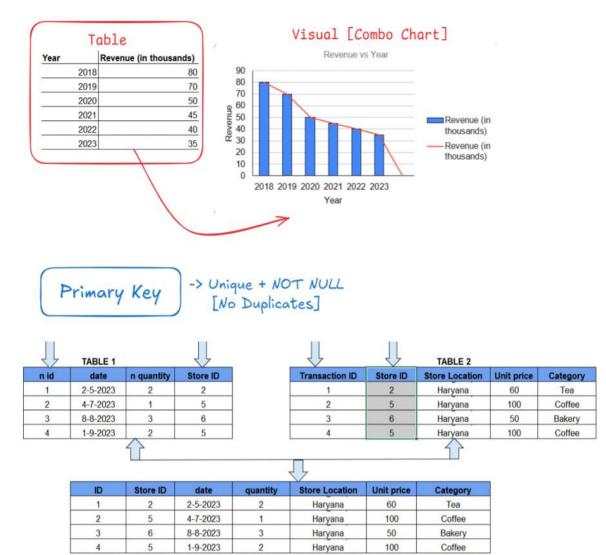
- Understand how Excel is used in Data Analytics.
- Navigate the Excel interface and its key parts.
- Perform essential operations like sorting, freezing, filtering, paste special, etc.
- Use shortcuts, understand basic formatting, and work with real data.
- Use conditional formatting effectively.
- ✓ Understand cell referencing (relative & absolute).
- ✓ Apply essential Excel functions (SUM, AVERAGE, IF, etc.).



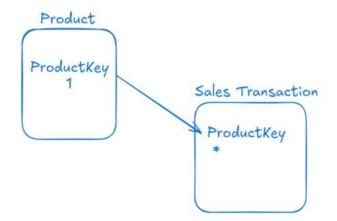
## 1 WHY EXCEL FOR DATA ANALYTICS?

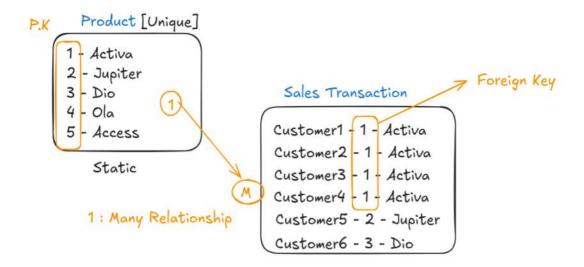
Microsoft Excel is like the Swiss Army knife of analytics - simple, powerful, and everywhere!

- Q Benefits of Using Excel:
  - & Easy to Use Intuitive for beginners
  - Familiar Used in schools, jobs, and homes
  - Versatile Formulas, charts, macros, pivot tables
  - Import & Export From/to databases, CSV, websites
  - ✓ Clean & Transform Remove duplicates, format data, fill gaps
  - 📊 Visualize Charts, conditional formatting
  - Ø Integrated With Word, PowerPoint, Outlook
  - Cost-effective Already part of the MS Office Suite



Merging table 1 and table 2 with the help of two common variables i.e. Transaction ID and Store ID





To Join Product Table having all unique product -> Connects with Sales Table having repeated values



Defining the data types of each column after merging both the tables

ID	Store ID	date	quantity	Location	Unit price	Category
1	2	2-5-2023	2	Haryana	60	Tea
2	5	4-7-2023	1	Haryana	100	Coffee
3	6	8-8-2023	3	Haryana	50	Bakery
4	5	1-9-2023	2	Haryana	100	Coffee
5	2	16-11-2023	NA	NA	50	Bakery
6	7	06-09-2023	1	NA	60	NA

Transaction ID	Store ID	Transaction date	Transaction quantity	Store Location	Unit price	Product Category
1 2 2-5-2023		2	Gurugram, Haryana	60	Tea	
2	5	4-7-2023	1	Gurugram, Haryana	100	Coffee
3	6	8-8-2023	3	Gurugram, Haryana	50	Bakery
4	5	1-9-2023	2	Gurugram, Haryana	100	Coffee
5	7	23-09-2023	100	Gurugram, Haryana	60	Tea

In the transaction quantity column, transaction ID is an outlier

# **Right-Skewed vs. Left-Skewed** Mean >> deviate more >> Outliers LEFT NEGATIVE SKEW POSITIVE SKEW RIGHT (5th+6th) = (50 + 60)/2 = 5510 20 30 40 50 60 70 80 90 100 1000 Mean = 55 Mean = 141 Median = 60 Median = 55 BOX - WHISKER - PLOT mean, median, mode are in centre Best Visual to identify outliers. Box & Whisker Plot Upper Lower 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Transaction ID	Store ID	Transaction date	Transaction quantity		
1	2	2-5-2023	2		
2	5	4-7-2023	1		
3	6	8-8-2023	3		
4	5	1-9-2023	2		

Store Location	City	State				
Gurugram, Haryana	Gurugram	Haryana				
Gurugram, Haryana	Gurugram	Haryana				
Gurugram, Haryana	Gurugram	Haryana				
Gurugram, Haryana	Gurugram	Haryana				

Product Category
Tea
Coffee
Bakery
Coffee

Bold borders represents the cleaned string characters on the store location

Separator - "," -> that splits the value into 2 columns



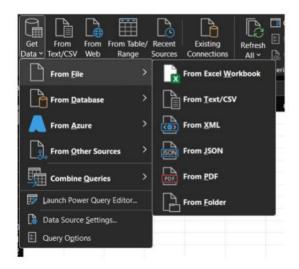
#### Home Ribbon





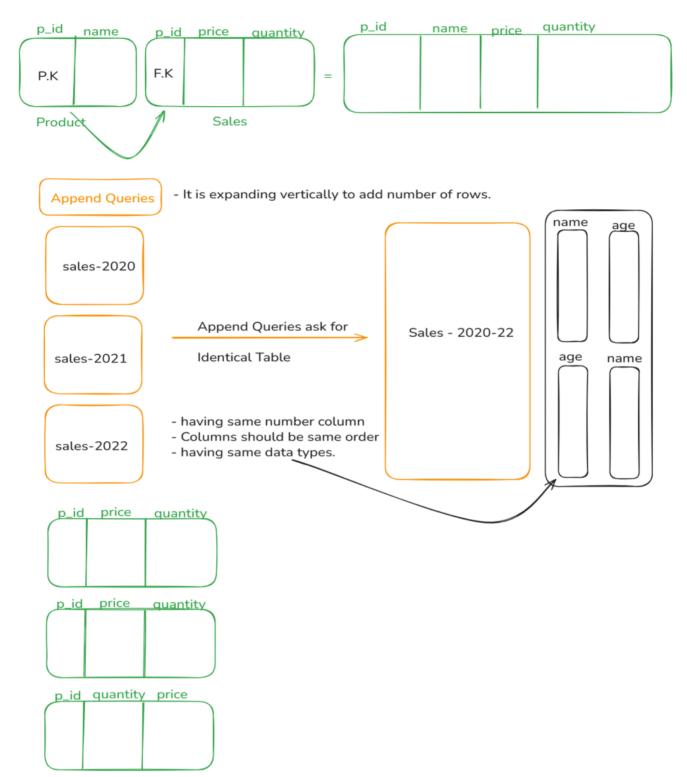








#### MERGE TABLE [Expanding the Columns -> Horizontal]

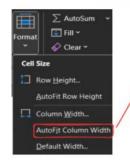


#### Nature of an Alignment

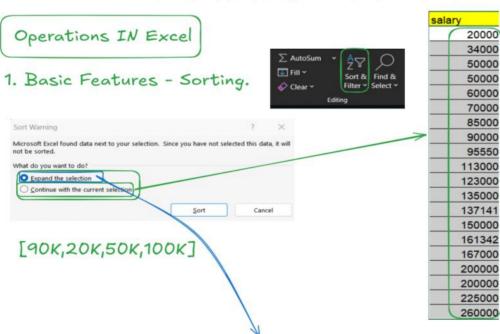
Text	Krishn	a	
Number		11	
Date		25-05-2025	Text - Left
Currency	\$		Numbers - Right

#### Work Book









work_year	experience_level	employment_type	job_title	salary	salary_currency	employee_residence	remote_ratio	company_location	company_size
2020	MI	FT	Data Scientist	70000	EUR	DE	0	DE	L
2020	SE	FT	Machine Learning Scientist	260000	USD	JP	0	JP	S
2020	SE	FT	Big Data Engineer	85000	GBP	GB	50	GB	M
2020	MI	FT	Product Data Analyst	20000	USD	HN	0	HN	S
2020	SE	FT	Machine Learning Engineer	150000	USD	US	50	US	L
2021	EN	FT	Machine Learning Scientist	225000	USD	US	100	US	L
2021	MI	FT	Data Scientist	50000	USD	NG	100	NG	L
2021	MI	FT	Data Science Engineer	34000	EUR	GR	100	GR	M
2021	EN	FT	Data Analyst	90000	USD	US	100	US	S
2021	MI	FT	Data Engineer	200000	USD	US	100	US	L
2021	MI	FT	Big Data Engineer	60000	USD	ES	50	RO	M
2021	SE	FT	Principal Data Engineer	200000	USD	US	100	US	M
2021	EN	FT	Data Analyst	50000	USD	US	100	US	M
2022	SE	FT	Data Scientist	95550	USD	US	0	US	M
2022	SE	FT	Data Engineer	113000	USD	US	0	US	L
2022	SE	FT	Data Analyst	135000	USD	US	100	US	М
2022	SE	FT	Data Science Manager	161342	USD	US	100	US	M
2022	SE	FT	Data Science Manager	137141	USD	US	100	US	М
2022	SE	FT	Data Scientist	167000	USD	US	100	US	М
2022	SE	FT	Data Scientist	123000	USD	US	100	US	M

# Largest To Smallest

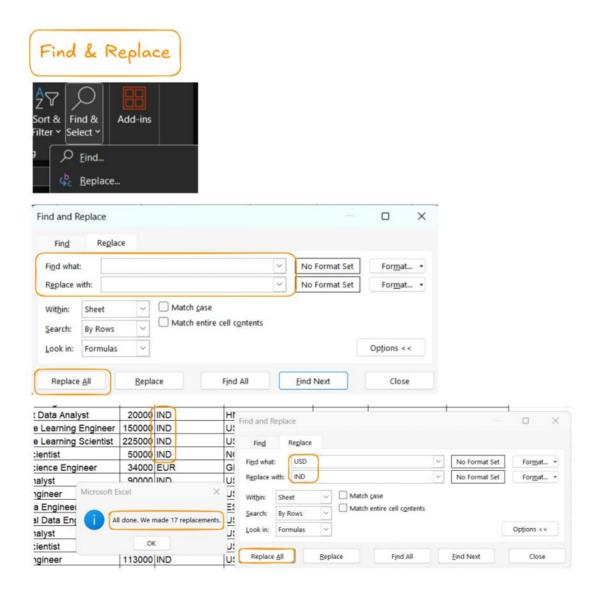
work_year	experience_level	employment_type	job_title	salary	salary_currency	employee_residence	remote_ratio	company_location	company_siz	e
2020	SE	FT	Machine Learning Scientist	260000	USD	JP	0	JP	S	
2021	EN	FT	Machine Learning Scientist	225000	USD	US	100	US	L	
2021	MI	FT	Data Engineer	200000	USD	US	100	US	L	
2021	SE	FT	Principal Data Engineer	200000	USD	US	100	US	М	
2022	SE	FT	Data Scientist	167000	USD	US	100	US	М	
2022	SE	FT	Data Science Manager	161342	USD	US	100	US	М	
2020	SE	FT	Machine Learning Engineer	150000	USD	US	50	US	L	
2022	SE	FT	Data Science Manager	137141	USD	US	100	US	М	
2022	SE	FT	Data Analyst	135000	USD	US	100	US	М	
2022	SE	FT	Data Scientist	123000	USD	US	100	US	М	
2022	SE	FT	Data Engineer	113000	USD	US	0	US	L	
2022	SE	FT	Data Scientist	95550	USD	US	0	US	М	
2021	EN	FT	Data Analyst	90000	USD	US	100	US	S	
2020	SE	FT	Big Data Engineer	85000	GBP	GB	50	GB	М	
2020	MI	FT	Data Scientist	70000	EUR	DE	0	DE	L	
2021	MI	FT	Big Data Engineer	60000	USD	ES	50	RO	М	
2021	MI	FT	Data Scientist	50000	USD	NG	100	NG	L	
2021	EN	FT	Data Analyst	50000	USD	US	100	US	М	_
2021	MI	FT	Data Science Engineer	34000	EUR	GR	100	GR	М	
2020	MI	FT	Product Data Analyst	20000	USD	HN	0	HN	s	

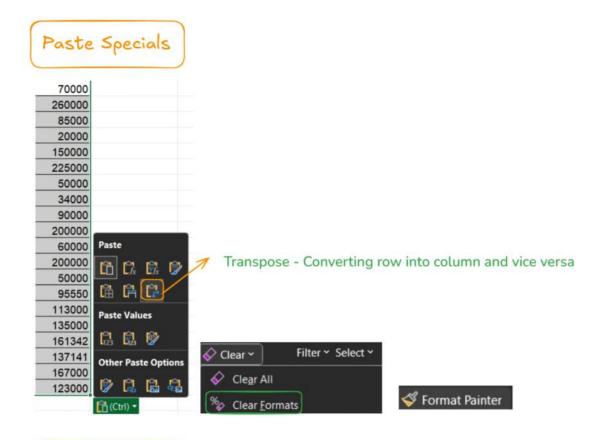
Freezing Pane



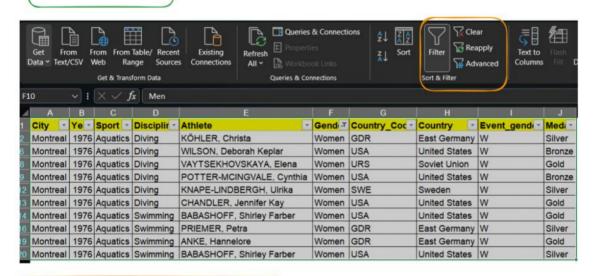


## C2 -> It will A&B Column & 1 in the row



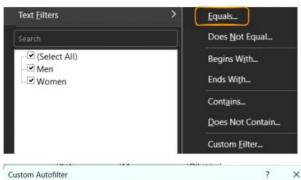


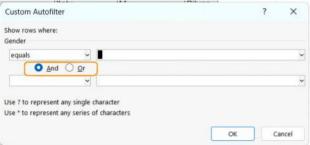
# Filters



# Removing Filters Vs Clearing Filter

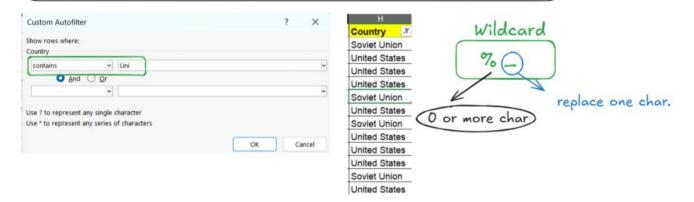






AND - Both statements needs to be True, then only filter apply

OR - Any one of the statements needs to be True, then only filter apply



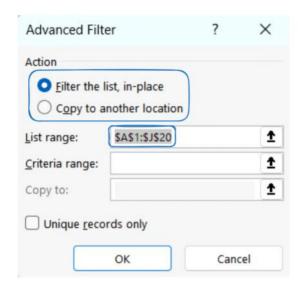
Soviet Union %Union

United States

no char ted States

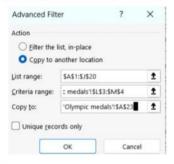
underscore
UNI\_\_

TINU



Α	В	С	D	E	F	G	H	3.2		-1		J	K	L	M
City	Year	Sport	Discipline	Athlete	Gender	Country_Code	Country		Even	t_gender	Me	dal			
Montreal	1976	Aquatics	Diving	KÖHLER, Christa	Women	GDR	Fast Germa	nv I	N		Sil	ver			
Montreal	1976	Aquatics	Diving	KOSENKOV, Aleksandr	Men	URS	Advanced Filter			?	×	nze		Gender	Medal
Montreal	1976	Aquatics	Diving	BOGGS, Philip George	Men	USA	Action					t		Women	Silver
Montreal	1976	Aquatics	Diving	CAGNOTTO, Giorgio Franco	Men	ITA						er			
Montreal	1976	Aquatics	Diving	WILSON, Deborah Keplar	Women	USA	O Eilter the list,					nze			
Montreal	1976	Aquatics	Diving	LOUGANIS, Gregory	Men	USA	Copy to anot	her lo	cation			ər			
Montreal	1976	Aquatics	Diving	VAYTSEKHOVSKAYA, Elena	Women	URS	ist range: \$4	4\$1:\$	1\$20		±	i			
Montreal	1976	Aquatics	Diving	POTTER-MCINGVALE, Cynthia	Women	USA	Criteria range: :	meda	ls1\$L\$3	SMS4	±	nze			
Montreal	1976	Aquatics	Diving	DIBIASI, Klaus	Men	ITA	Copy to:				±	1			
Montreal	1976	Aquatics	Diving	ALEINIK, Vladimir	Men	URS						nze			
Montreal	1976	Aquatics	Diving	KNAPE-LINDBERGH, Ulrika	Women	SWE	Unique records	only				er			
Montreal	1976	Aquatics	Diving	CHANDLER, Jennifer Kay	Women	USA	0	K		Cancel		t			
Montreal	1976	Aquatics	Swimming	BABASHOFF, Shirley Farber	Women	USA						,d			
Montreal	1976	Aquatics	Swimming	SHAW, Timothy Andrew	Men	USA	United State	s 1	М		Sil	ver			
Montreal	1976	Aquatics	Swimming	PRIEMER, Petra	Women	GDR	East Germa	ny I	N		Silver				
Montreal	1976	Aquatics	Swimming	HOLLAND, Stephen	Men	AUS	Australia	1	М		Bronze				
Montreal	1976	Aquatics	Swimming	SMIRNOV, Andrei	Men	URS	Soviet Union	1 1	М		Bro	onze			
Montreal	1976	Aquatics	Swimming	ANKE, Hannelore	Women	GDR	East Germa	ny \	N		Go	ild			
Montreal	1976	Aquatics	Swimming	BABASHOFF, Shirley Farber	Women	USA	United State	s I	N		Sil	ver			

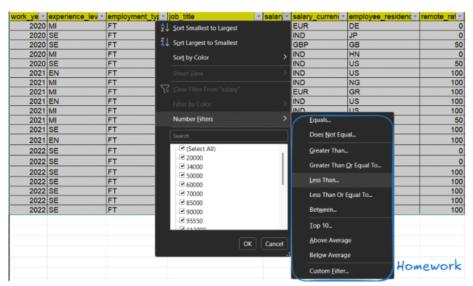
City	Year	Sport	Discipline	Athlete	Gender	Country_Code	Country	Event_gender	Medal
Montreal	1976	Aquatics	Diving	KÖHLER, Christa	Women	GDR	East Germany	W	Silver
Montreal	1976	Aquatics	Diving	KNAPE-LINDBERGH, Ulrika	Women	SWE	Sweden	W	Silver
Montreal	1976	Aquatics	Swimming	PRIEMER, Petra	Women	GDR	East Germany	W	Silver
Montreal	1976	Aquatics	Swimming	BABASHOFF, Shirley Farber	Women	USA	United States	W	Silver



City	Year	Sport	Discipline	Athlete	Gender	Country_Code	Country	Event_gender	Medal
Montreal	1976	Aquatics	Diving	KÖHLER, Christa	Women	GDR	East Germany	W	Silver
Montreal	1976	Aquatics	Diving	KNAPE-LINDBERGH, Ulrika	Women	SWE	Sweden	W	Silver
Montreal	1976	Aquatics	Swimming	PRIEMER, Petra	Women	GDR	East Germany	W	Silver
Montreal	1976	Aquatics	Swimming	BABASHOFF, Shirley Farber	Women	USA	United States	W	Silver

Gender	Medal
Men	Bronze

City	Year	Sport	Discipline	Athlete	Gender	Country_Code	Country	Event_gender	Medal
Montreal	1976	Aquatics	Diving	KOSENKOV, Aleksandr	Men	URS	Soviet Union	М	Bronze
Montreal	1976	Aquatics	Diving	ALEINIK, Vladimir	Men	URS	Soviet Union	М	Bronze
Montreal	1976	Aquatics	Swimming	HOLLAND, Stephen	Men	AUS	Australia	М	Bronze
Montreal	1976	Aquatics	Swimming	SMIRNOV, Andrei	Men	URS	Soviet Union	М	Bronze



vork vear	experience level	employment_type	iob title	salarv	salary_currency	employee_residence	remote ratio	company location	company size		Salary	job title
2020		FT	Data Scientist	70000		DE		DE	L		>150000	Data Scientist
2020	SE	FT	Machine Learning Scientist	260000	IND	JP	0	JP	S	(		
2020	SE	FT	Big Data Engineer	85000	GBP	GB	50	GB	M			
2020	MI	FT	Product Data Analyst	20000	IND	HN	0	HN	S			
2020	SE	FT	Machine Learning Engineer	150000		US	50		L			
2021	EN	FT	Machine Learning Scientist	225000	IND	US	100	US	L			
2021	MI	FT	Data Scientist	50000	IND	NG	100	NG	L			
2021	MI	FT	Data Science Engineer	34000	EUR	GR	100	GR	M			
2021		FT	Data Analyst	90000		US	100		S			
2021	MI	FT	Data Engineer	200000	IND	US	100	US	L			
2021	1411	FT	Big Data Engineer	60000		ES		RO	M			
2021	SE	FT	Principal Data Engineer	200000	IND	US	100	US	M			
2021	EN	FT	Data Analyst	50000	IND	US	100	US	M			
2022	SE	FT	Data Scientist	95550	IND	US	0	US	M			
2022	SE	FT	Data Engineer	113000	IND	US	0	US	L			
2022	SE	FT	Data Analyst	135000	IND	US	100	US	M			
2022	SE	FT	Data Science Manager	161342	IND	US	100	US	M			
2022	SE	FT	Data Science Manager	137141	IND	US	100	US	M			
2022	SE	FT	Data Scientist	167000	IND	US	100	US	M			
2022	SE	FT	Data Scientist	123000	IND	US	100	US	M			
work_year	experience_level	employment_type	job_title	salary	salary_currency	employee_residence	remote_ratio	company_location	company_size			
2022	SE	FT	Data Scientist	167000		us	100		M			