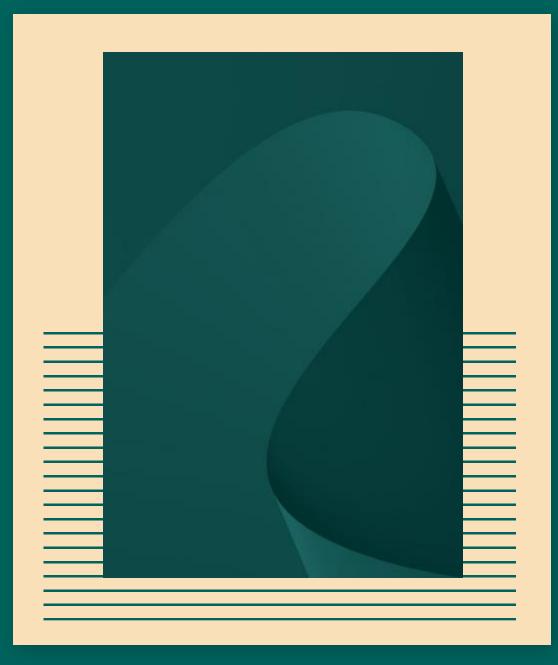
# FORM RESPONSE ANALYSIS USING EXCEL

By: Nathan Christopher Menon

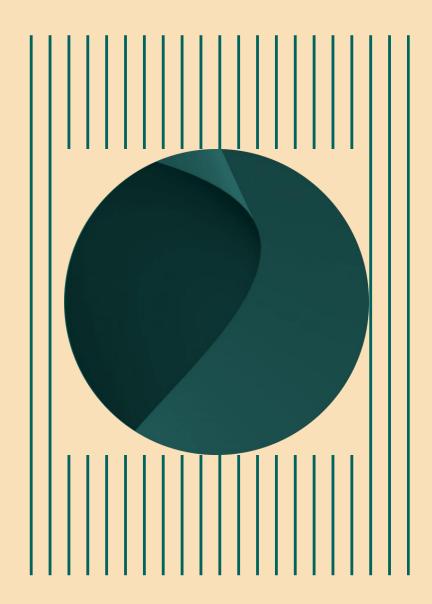
# Agenda

- 1. Objective
- 2. Overview of the Data
- 3. Overview of the tasks
- 4. Tools used
- 5. Methodology and Results
- 6. Key Findings



### Objective

- To perform data analysis on the realtime responses received at Data play.
- The form response Excel workbook has
   three sheets in it: One containing the
   student info, one containing the test
   score, and the final one containing
   details about the questions and
   answers of the Google form filled by
   the onboarding students



### Overview of the Data

# Form responses

This form contains the general as well as academic information of the students

1	Timestamp 🔻	Applicant ID Sc	ores T College Year of St	udy in Colle Degree	Enrolled	▼ Your Hc ▼ HomeT	▼ Branch ▼	I am an Preferr
18	6/12/2024 9:36:47	17	11 MBM Univ College Pa	ass out B.E.	Yes	Jodhpur 3420	001 EEE	Data Analy Online
95	6/12/2024 11:20:39	94	15 MBM Univ	3 BTech	Yes	Jaipur 3020	18 Related to	Data Analy Offline
109	6/12/2024 12:17:50	108	12 Hindustan College Pa	ass out BTech	Yes	Asansol 7133	04 Aerospace	Data Scient Online
120	6/12/2024 13:23:37	119	10 Noida insti College Pa	ass out BTech	Yes	Meerut 2500	02 Mechanica	Data Scient Offline
179	6/17/2024 22:42:33	178	8 Career Poir	2 MCA	Yes	Kota 3240	05 Related to	Not Decide Offline
199	6/19/2024 16:12:58	198	11 Maharishi	1 BCA	Yes	Jaipur 3020	012 CS/IT	Data Scient Online
228	6/20/2024 13:41:44	227	14 Manipal Uı	4 BTech	Yes	Jaipur 3030	007 CS/IT	Data Scient Online
244	6/20/2024 13:48:10	243	12 Poornima (	4 BTech	Yes	Jaipur 3020	17 Artificial in	Data Scient Offline
263	6/20/2024 14:02:14	262	12 JAI PRAKAS College Pa	ass out <u>B.Sc</u>	Yes	SARAN 8414	03 Related to	Data Scient Online
334	6/24/2024 16:59:11	333	6 Manipal Ui	3 BTech	Yes	Bahadurga 1245	507 CS/IT	Data Analy Online
351	6/29/2024 11:27:50	350	9 IPH-Rajasti College Pa	ass out MPH	Yes	Jaipur 3020	12 Biostatistic	Data Scient Offline
386	6/30/2024 7:52:58	385	16 Artificial In	4 BTech	Yes	KURNOOL 5180	002 CS/IT	Data Analy Offline
444	6/30/2024 15:39:53	443	15 Maharaja a	4 BTech	Yes	Meham 1241	12 CS/IT	Data Scient Online
460	6/30/2024 20:33:38	459	11 Poornima (	3 BTech	Yes	Jaipur 3020	)21 CS/IT	Not Decide Offline
463	7/1/2024 14:14:45	462	5 Poornima (	3 BTech	Yes	Shiwar 3227	04 Related to	Data Scient Offline
487	7/2/2024 1:54:24	486	18 Birla Institu	3 BTech	Yes	Jaipur 3020	17 ECE	Data Scient Online
506	7/2/2024 18:42:50	505	15 Poornima (	3 BTech	Yes	Jaipur 3020	)20 CS/IT	Not Decide Offline
515	7/2/2024 20:53:55	514	12 RB Institue College Pa	ass out MCA	Yes	Ahmedaba 3823	345 CS/IT	Data Analy Online
516	7/2/2024 22:38:45	515	8 R.C.S.C ,Ko College Pa	ass out M.Sc statis	Yes	Pattankodo 4162	.02 M.sc statis	Data Analy Online
518	7/3/2024 12:18:44	517	8 Ddu univer College Pa	ass out Bcom	Yes	Jaipur soda 3020	19 Related to	Data Analy Offline
520	7/3/2024 14:40:04	519	6 Vellore inst	2 MCA	Yes	Rajakhera 3280	025 CS/IT	Data Scient Offline
521	7/3/2024 21:45:16	520	11 IIIT DHARW	3 BTech	Yes	Jaipur 3020	012 CS/IT	Intrested to Offline
522	7/4/2024 19:36:44	521	8 MBMU College Pa	ass out BTech	Yes	Jodhpur 3420	001 EEE	Data Analy Online
523	7/4/2024 19:37:10	522	10 Career poir	3 BCA	Yes	Kota Rajast 3240	001 CS/IT	Not Decide Online
524	7/4/2024 19:37:22	523	20 M.B.M Uni	2 BE	Yes	Jaipur 3020	19 CS/IT	Data Scient Offline
525	7/4/2024 19:37:29	524	13 Siksha o ar	4 BTech		Bhadrak 7561	L81 CS/IT	Data Scient Online
רייר	7/4/2024 40:27:24	F 2 F2F	7 846	1	V		112 CC/IT	Data Calana Onlina
<	> ToDo	Form Responses	SubmittedResponses Question[	Details +		: •		

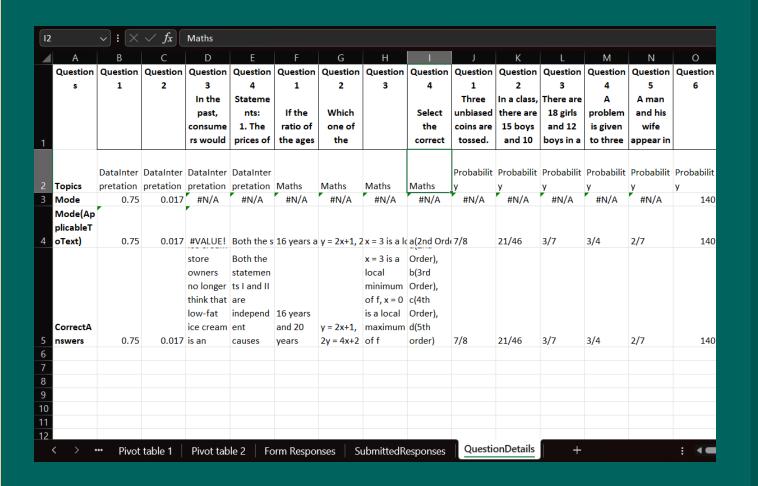
# Submitted responses

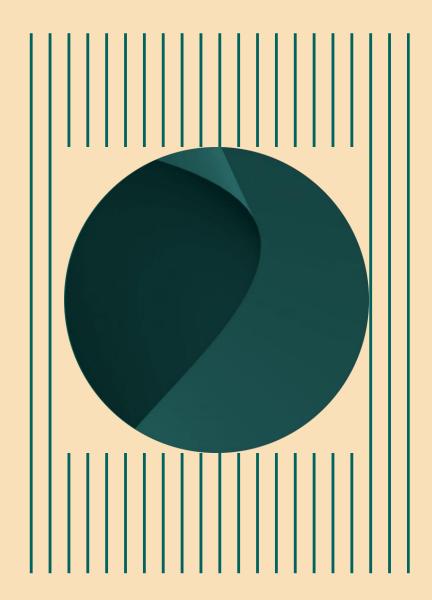
This form contains the answers of each and every question given by the students as well as their total score

4	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р
	Timestamp	Applicant ID	Score	Question	Question	Question	Question	Question	Question	Question	Question	Question	Question	Question	Question	Question
				1	2	3	4	1	2	3	4	1	2	3	4	5
						In the	Stateme					Three	In a class,	There are	Α	A man
						past,	nts:	If the	Which		Select	unbiased	there are	18 girls	problem	and his
						consume	1. The	ratio of	one of		the	coins are	15 boys	and 12	is given	wife
						rs would	prices of	the ages	the		correct	tossed.	and 10	boys in a	to three	appear in
						rarely	petrol	of two	following		degree of	What is	girls.	class.	students	an
						walk into		persons	equation		polynomi		Three	(2/9) of	whose	interview
						an ice		is 4:5 and	· ·		al	Ι'	students	_	chances	for two
						cream	the	the sum	s line			ty of	are	and (1/4)		vacancie
							domestic	of their	graph.			getting at		of the	solving it	
						order low		ages is 36				most two		boys	are 1/2,	same
						fat ice	have	years,				heads?	random.	walk to	1/3 and	post. The
1						cream.	remained	find their					The	school.	1/4	probabili
	2024-07-04 19:32:30	530	11	0.625	0.021	low-fat ice	Statement	16 years a	y = -2x+1	x = -1 is a l	a(2nd Ord	7/8	21/46	3/7	3/4	3/4
3	2024-07-04 19:45:32	522	! 10	0.75	0.017	consumer	Both the s	16 years a	nd 20 year	s x = 0 is a lo	a(2nd Ord	7/8	21/46		3/4	2/7
4	2024-07-04 19:22:53	529			0.017	ice cream	Both the s	16 years a	y = -2x+1	x = 0 is a lo	b(2nd Ord	7/8	21/46	3/7	3/4	3/4
	2024-07-05 18:37:36	333			0.021					2x = 0 is a lo	,		1/50	3/7	1/2	3/4
_	2024-07-04 19:21:58	531						16 years a			a(2nd Ord		3/25	12/30	3/4	1/7
_	2024-07-04 19:58:21	523			0.017					2x = 3 is a lo			21/46	3/7	3/4	2/7
	2024-07-04 19:23:02	526				1		16 years a			a(2nd Ord	-,-	25/117	3/12	7/12	2/7
	2024-07-04 20:03:12	262				•				s x = 3 is a lo			21/46	3/7	3/4	2/7
	2024-07-04 20:21:07	94								2 x = 3 is a lo			21/46	3/7	3/4	4/5
_	2024-07-05 18:59:00	178								x = 3 is a lo	,			3/7	7/12	1/7
_	2024-07-04 19:47:43	521								x = 0 is a lo	,		21/46	3/7	1/4	2/7
	2024-07-04 19:33:06	527						16 years a				7/8	21/46	3/7	3/4	3/4
14	2024-07-04 20:05:19	514	12	0.75	_		-	16 years a	y = 2x+1	x = 3 is a lo	ocal minim	7/8	21/46		3/4	2/7
-	> ••• Pivot t	table 1   Pivot tabl	o 2 For	m Respons	Sul	omittedRe	cnoncec	Question	-D-4-11-	+			: 1=			

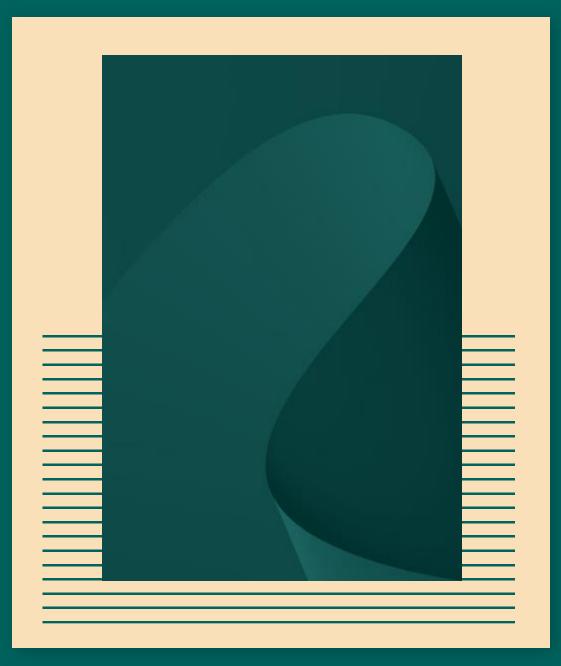
#### **Question details**

This form contains the correct answer for each question



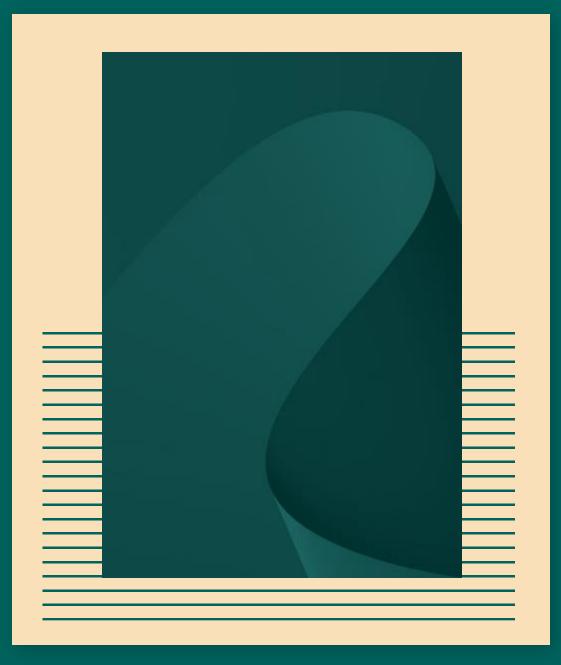


Overview of the Tasks



#### Tasks

- Task 1: Do a Vlookup of Scores from "submitted responses" sheet to "form responses" sheet
- Task 2: Create a Pivot table to display average scores wrt "I am an Aspiring " field for enrolled students
- Task 3: Create a Pivot table for displaying degree and there average scores for only those who submitted test



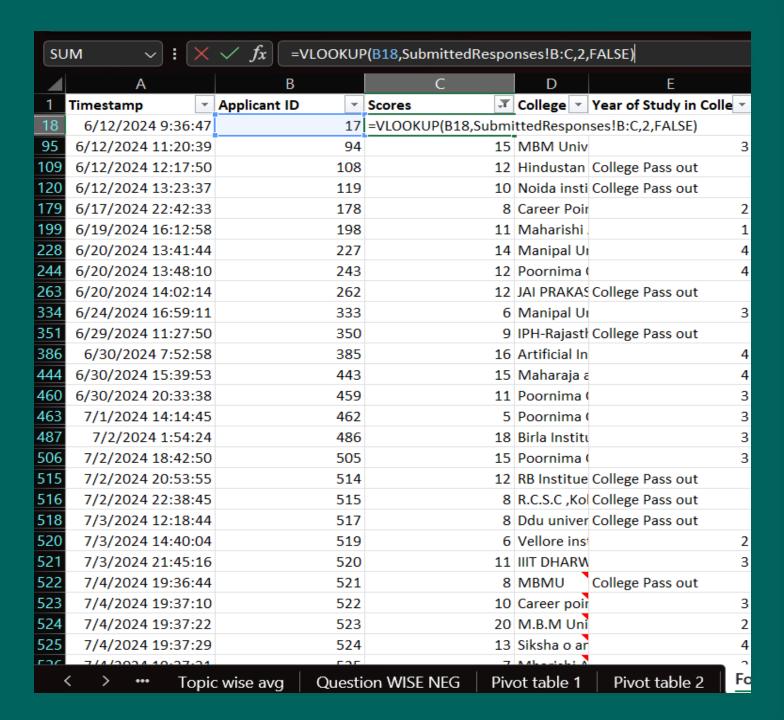
#### Tasks Continued...

- Task 4: Create a new sheet named
   "QuestionWiseScores" in Excel where
   each student's answers are evaluated
   with 1 mark for a correct answer and 0 for
   a wrong answer
- Task 5: Recalculate Question Wise Score considering 1 mark for the right answer and -1 for wrong answer and 0 for empty
- Task 6: Find out the average score topicwise



- VLOOKUP
- AVERAGE
- IF
- PIVOT TABLES
- PASTE TRANSPOSE

# Methodology and Results



 Select the Applicant ID in the form response table and then select the applicant ID and score column in the Submitted response table. Set the target column as 2 and final parameter as FALSE

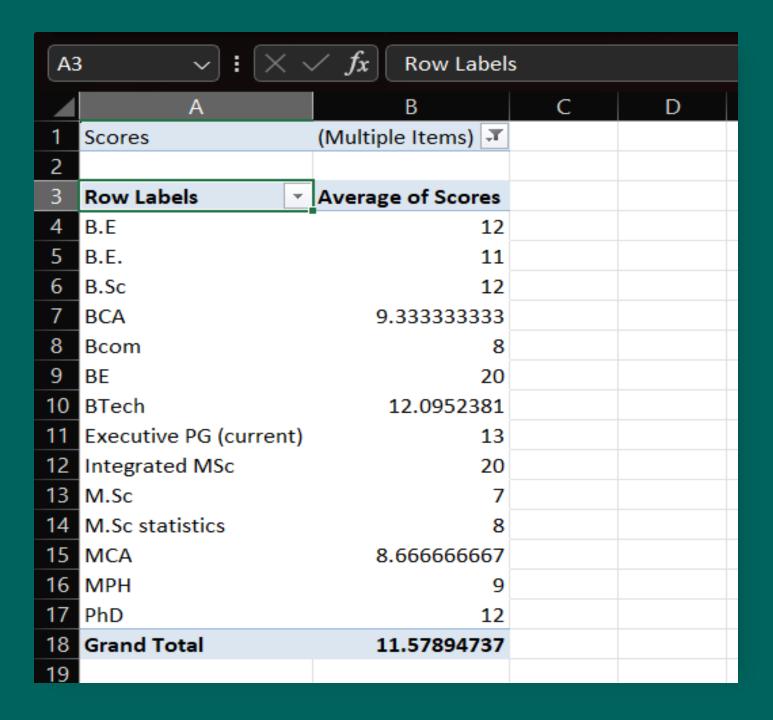
4	А	В	С	D
1	Scores	(Multiple Items) 🕶		
2				
3	Row Labels 🔻	Average of Scores		
4	Data Analyst	10.4		
5	Data Scientist	11.9		
6	Intrested to learn	11		
7	Not Decided Yet	12.42857143		
8	Grand Total	11.57894737		
9				
10				
11				
12				
13				
1/				

Select the form response

 table and create a pivot
 table. Then add 'I am

 Aspiring' column as rows,

 average score as values and
 scores with non zero values as
 filter.



Select the form response

 table and create a pivot
 table. Then add 'Degree of
 study' as rows, Average
 scores as values, and scores

 with non-zero values as filter.

D2	D2 $\checkmark$ : $\times$ $\checkmark$ $f_x$ =IF(SubmittedResponses!D2=QuestionDetails!B5,1,0)									
	A	В	С	D	Е	F	G	Н	1	J
	Timestamp	Applicant ID	Score	Question	Question	Question	Question	Question	Question	Question
				1	2	3	4	1	2	3
						In the	Stateme			
						past,	nts:	If the	Which	
						consume	1. The	ratio of	one of	
						rs would	prices of	_	the	
						rarely	petrol	of two	following	
						walk into	and	persons	equation	
						an ice	diesel in		represent	
						cream store and	the domestic	the sum of their	s line	
						order low-		ages is 36	graph.	
						fat ice	have	years,		
						cream.		find their		
1	2024 07 04 40 22 20	530	44							
3	2024-07-04 19:32:30 2024-07-04 19:45:32	530 522	11 10	0	0		0	0		
4	2024-07-04 19:45:32 2024-07-04 19:22:53	529	10	0	0	0	0	0		
5	2024-07-04 19.22.35 2024-07-05 18:37:36	333	6	1	0		0	0		
6	2024-07-04 19:21:58	531	4	1	1		0	0		
7	2024-07-04 19:58:21	523	20	0	0		1	0		
8	2024-07-04 19:23:02	526	7	0	1		0	0		
9	2024-07-04 20:03:12	262	12	1	1		0	0	1	
10	2024-07-04 20:21:07	94	15	0	0	0	0	0	0	0
11	2024-07-05 18:59:00	178	8	0	0	0	0	0	0	0
12	2024-07-04 19:47:43	521	8	0	0	0	0	0	0	0
13	2024-07-04 19:33:06	527	12	0	0	0	0	0	0	1
14	2024-07-04 20:05:19	514	.2	0	0	0	0	0	0	0
(	Quest	ionWiseScores Pi	vot table 1	Pivot	table 2	Form Res	ponses	Submitte	edRespons	es Que

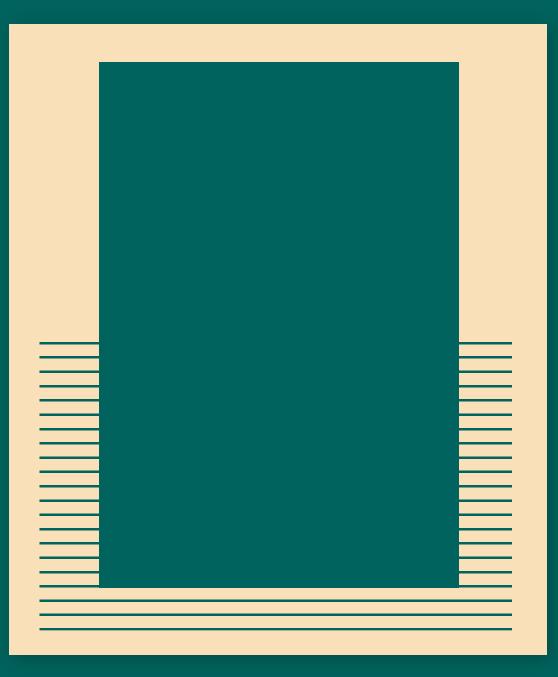
Perform the IF function using
the correct answers in the
Question Details sheet after
copying the
SubmittedResponses table
and setting 1 for correct and
0 for incorrect answer

Α	В	С	D	E	F	G	Н	1
Timestamp	Applicant ID	Score	Question	Question	Question	Question	Question	Question
			1	2	3	4	1	2
					In the	Stateme		
					past,	nts:	If the	Which
					consume	1. The	ratio of	one of
					rs would	prices of	the ages	the
					rarely	petrol	of two	following
					walk into	and	persons	equation
					an ice	diesel in	is 4:5 and	represent
					cream	the	the sum	s line
					store and	domestic	of their	graph.
					order low-		ages is 36	
					fat ice	have	years,	
					cream.	remained	find their	
2024-07-04 19:32:30	530	11	=IF(Submit	tedRespon	ses!D2="",	0,IF(Submit	tedRespon	ses!D2=Qu
2024-07-04 19:45:32	522	10	IF(logica	l_test, [value	e_if_true], [va	alue_if_false	-1	0
2024-07-04 19:22:53	529	12	-1	-1	-1	-1	-1	-1
2024-07-05 18:37:36	333	6	0	-1	-1	-1	-1	-1
2024-07-04 19:21:58	531	4	0	0	-1	-1	-1	-1
2024-07-04 19:58:21	523	20	-1	-1	-1	0	-1	-1
2024-07-04 19:23:02	526	7	-1	0	-1	-1	-1	-1
2024-07-04 20:03:12	262	12	0	0	-1	-1	-1	0
2024-07-04 20:21:07	94	15	-1	-1	-1	-1	-1	-1
2024-07-05 18:59:00	178	8	-1	-1	-1	-1	-1	-1
2024-07-04 19:47:43	521	8	-1	-1	-1	-1	-1	-1
2024-07-04 19:33:06	527	12	-1	-1	-1	-1	-1	-1
2024-07-04 20:05:19	514	12	-1	-1	-1	-1	-1	-1
Ouest	ion WISE NEG		p:	-bl- 2	Гата Вал		C. dansitta	In

Copy the
 QuestionWiseAnswers in the
 previous task and set the
 condition to 1 for the correct
 answer, -1 for incorrect
 answer, and 0 for not
 attempting

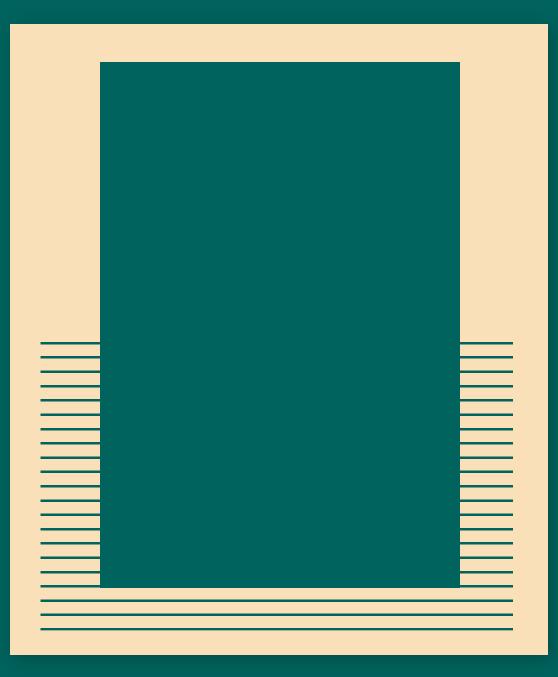
А	В		
Topic	Average Score		
DataInterpretation	0.13	Row Labels	Average of Average Score
DataInterpretation	0.24		
DataInterpretation	0.08	Aptitude	0.50877193
DataInterpretation	0.08		
Maths	0.03	CodingLogic	0.157894737
Maths	0.16	Coullibropic	0.137037137
Maths	0.29		
Maths	0.32	_	
Probability	0.08	DataInterpretation	0.131578947
Probability	0.18	Maths	0.197368421
Probability	0.21	Probability	0.254385965
Probability	0.24	Stats	0.221052632
Probability	0.24	(blank)	
Probability	0.58		
Stats	0.05	Cuand Tatal	0.3440E13F0
Stats	0.18	Grand Total	0.244851259

 Use the AVERAGE function to get the avg. score and then extrapolate the columns and use paste transpose. Create a pivot table using these and get the average score topicwise



## **Key Findings**

future career have a higher score compared to those who chose Data Analyst as their future career, this doesn't indicate that one group is smarter than the other as the form posed questions about data science along with data analysis, thus explaining the edge that the aspiring data scientists have in scores.



# **Key Findings**

Postgraduate students and Doctorate students have a slightly higher score compared to undergrad students but this all can be attributed to them having more knowledge in the particular domain due to their higher qualifications.

# Thank You