

Layoff SQL Project

Let's set our campaign up for success

Presented By:

Sabbir Uddin Akash



Agenda

This project is divided into two major phases:

Phase 1: Data Cleaning (Using SQL)

- Create a staging table for cleaning operations
- Remove duplicate records using `ROW_NUMBER()`
- Standardize values
- Convert date formats from text to proper DATE type
- Handle nulls and blanks
- Drop unnecessary columns

Phase 2: Exploratory Data Analysis (EDA)

- Identify companies with the highest layoffs
- Analyze layoffs
- Detect companies with 100% layoffs
- Analyze monthly trends and cumulative layoffs using window functions
- Rank companies with the highest layoffs

Project Overview

This SQL-based project explores global tech layoffs to understand patterns and business impacts. Starting from raw, messy data, I followed a structured cleaning approach and then performed detailed analysis using SQL only — without any external tools or dashboards.

Through this project, I aimed to:

- Demonstrate real-world data wrangling with SQL
- Extract business insights on industry trends, company layoffs, and market health
- Prepare a clean and ready dataset for future dashboard visualization or machine learning use

This project highlights my ability to clean, structure, and analyze real-world datasets using SQL — a crucial skill for any data analyst or business intelligence role.

Data Cleaning Project

```
1 • CREATE DATABASE world_layoffs;
2 • USE world_layoffs;
3
4 • SELECT *
5   FROM layoffs;
6   -- Required Steps :
7   -- 1. Remove Duplicates
8   -- 2. Standardize the Data
9   -- 3. Null Values or Blank Values
10  -- 4. Remove Any Columns or Rows
11
12 • CREATE TABLE layoffs_staging
13   LIKE layoffs;
14
15 • SELECT *
16   FROM layoffs_staging;
17
18 • INSERT INTO layoffs_staging
19   SELECT * FROM layoffs;
```

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Atlassian	Sydney	Other	500	0.05	3/6/2023	Post-IPO	Australia	210
	SiriusXM	New York City	Media	475	0.08	3/6/2023	Post-IPO	United States	525
	Alerzo	Ibadan	Retail	400	NULL	3/6/2023	Series B	Nigeria	16
	UpGrad	Mumbai	Education	120	NULL	3/6/2023	Unknown	India	631
	Loft	Sao Paulo	Real Estate	340	0.15	3/3/2023	Unknown	Brazil	788
	Embark Trucks	SF Bay Area	Transportation	230	0.7	3/3/2023	Post-IPO	United States	317
	Lendi	Sydney	Real Estate	100	NULL	3/3/2023	Unknown	Australia	59
	UserTesting	SF Bay Area	Marketing	63	NULL	3/3/2023	Acquired	United States	152
	Airbnb	SF Bay Area		30	NULL	3/3/2023	Post-IPO	United States	6400
	Accolade	Seattle	Healthcare	NULL	NULL	3/3/2023	Post-IPO	United States	458
	Indigo	Boston	Other	NULL	NULL	3/3/2023	Series F	United States.	1200
	Zscaler	SF Bay Area	Security	177	0.03	3/2/2023	Post-IPO	United States	148
	MasterClass	SF Bay Area	Education	79	NULL	3/2/2023	Series E	United States	461
	Ambev Tech	Blumenau	Food	50	NULL	3/2/2023	Acquired	Brazil	NULL
	Fittr	Pune	Fitness	30	0.11	3/2/2023	Series A	India	13
	CNET	SF Bay Area	Media	12	0.1	3/2/2023	Acquired	United States	20
	Flipkart	Bengaluru	Retail	NULL	NULL	3/2/2023	Acquired	India	12900

Data Cleaning Project

```
21    -- Finding Duplicates
22
23
24 • WITH duplicate_cte AS
25   (SELECT *,
26    ROW_NUMBER() OVER(
27      PARTITION BY company, location, industry, total_laid_off, percentage_laid_off,
28      'date', stage, country, funds_raised_millions) AS row_num
29    FROM layoffs_staging)
30    SELECT * FROM duplicate_cte
31    WHERE row_num > 1;
32
```

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	Better.com	New York City	Real Estate	NULL	NULL	8/26/2022	Unknown	United States	905	2
	Casper	New York City	Retail	NULL	NULL	9/14/2021	Post-IPO	United States	339	2
	Cazoo	London	Transportation	750	0.15	6/7/2022	Post-IPO	United Kingdom	2000	2
	Elemy	SF Bay Area	Healthcare	NULL	NULL	12/5/2022	Series B	United States	323	2
	ExtraHop	Seattle	Security	NULL	NULL	4/22/2020	Series C	United States	61	2
	Hibob	Tel Aviv	HR	70	0.3	3/30/2020	Series A	Israel	45	2
	iFit	Logan	Fitness	NULL	NULL	2/25/2022	Private Equity	United States	200	2
	Microsoft	Seattle	Other	NULL	NULL	10/17/2022	Post-IPO	United States	1	2
	Ola	Bengaluru	Transportation	200	NULL	9/19/2022	Series J	India	5000	2
	Olist	Curitiba	Retail	NULL	NULL	1/30/2023	Series E	Brazil	322	2
	Oracle	SF Bay Area	Other	NULL	NULL	1/17/2023	Post-IPO	United States	NULL	2

Data Cleaning Project

```
35 • SELECT *
36   FROM layoffs_staging
37 WHERE company = 'Ola';
38
39
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Ola	Bengaluru	Transportation	200	NULL	1/13/2023	Series J	India	5000
	Ola	Bengaluru	Transportation	200	NULL	9/19/2022	Series J	India	5000
	Ola	Bengaluru	Transportation	1000	NULL	7/29/2022	Series J	India	5000
	Ola	Bengaluru	Transportation	1400	0.35	5/20/2020	Series J	India	3800

Data Cleaning Project

```
41 • Ⓜ CREATE TABLE `layoffs_staging1` (
42     `company` text,
43     `location` text,
44     `industry` text,
45     `total_laid_off` int DEFAULT NULL,
46     `percentage_laid_off` text,
47     `date` text,
48     `stage` text,
49     `country` text,
50     `funds_raised_millions` int DEFAULT NULL,
51     `row_num` INT
52 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
53
54
55 • SELECT *
56   FROM layoffs_staging1;
```

Data Cleaning Project

```
59 •    INSERT INTO layoffs_staging1
60      WITH duplicate_cte AS
61        (SELECT *,
62         ROW_NUMBER() OVER(
63             PARTITION BY company, location, industry, total_laid_off, percentage_laid_off,
64             'date', stage, country, funds_raised_millions) AS row_num
65         FROM layoffs_staging)
66     SELECT * FROM duplicate_cte
67     WHERE row_num > 1;
68
69
70 •    TRUNCATE layoffs_staging1;
71
```

Data Cleaning Project

```
73 • INSERT INTO layoffs_staging1
74   SELECT *,
75     ROW_NUMBER() OVER(
76       PARTITION BY company, location, industry, total_laid_off, percentage_laid_off,
77       'date', stage, country, funds_raised_millions) AS row_num
78   FROM layoffs_staging;
79
80
81 • SELECT *
82   FROM layoffs_staging1
83   WHERE row_num > 1;
```

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	Better.com	New York City	Real Estate	NULL	NULL	8/26/2022	Unknown	United States	905	2
	Casper	New York City	Retail	NULL	NULL	9/14/2021	Post-IPO	United States	339	2
	Cazoo	London	Transportation	750	0.15	6/7/2022	Post-IPO	United Kingdom	2000	2
	Elemy	SF Bay Area	Healthcare	NULL	NULL	12/5/2022	Series B	United States	323	2
	ExtraHop	Seattle	Security	NULL	NULL	4/22/2020	Series C	United States	61	2
	Hibob	Tel Aviv	HR	70	0.3	3/30/2020	Series A	Israel	45	2
	iFit	Logan	Fitness	NULL	NULL	2/25/2022	Private Equity	United States	200	2
	Microsoft	Seattle	Other	NULL	NULL	10/17/2022	Post-IPO	United States	1	2
	Ola	Bengaluru	Transportation	200	NULL	9/19/2022	Series J	India	5000	2
	Olist	Curitiba	Retail	NULL	NULL	1/30/2023	Series E	Brazil	322	2
	Orade	SF Bay Area	Other	NULL	NULL	1/17/2023	Post-IPO	United States	NULL	2
	Oyster	Charlotte	HR	NULL	NULL	1/30/2023	Series C	United States	224	2
	Pear Therapeutics	Boston	Healthcare	59	0.22	11/14/2022	Post-IPO	United States	409	2
	Service	Los Angeles	Travel	NULL	1	3/20/2020	Seed	United States	5	2
	Shopee	Jakarta	Food	NULL	NULL	11/14/2022	Unknown	Indonesia	NULL	2
	Spotify	Stockholm	Media	NULL	NULL	11/9/2022	Post-IPO	Sweden	2100	2
	Talkdesk	SF Bay Area	Support	NULL	NULL	2/2/2023	Series D	United States	497	2

Data Cleaning Project

```
89 • SET SQL_SAFE_UPDATES= 0 ;  
90  
91 • DELETE  
92   FROM layoffs_staging1  
93   WHERE row_num > 1;  
94  
95 • SELECT *  
96   FROM layoffs_staging1;
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	E Inc.	Toronto	Transportation	NULL	NULL	12/16/2022	Post-IPO	Canada	NULL	1
	Included Health	SF Bay Area	Healthcare	NULL	0.06	7/25/2022	Series E	United States	272	1
	&Open	Dublin	Marketing	9	0.09	11/17/2022	Series A	Ireland	35	1
	#Paid	Toronto	Marketing	19	0.17	1/27/2023	Series B	Canada	21	1
	100 Thieves	Los Angeles	Consumer	12	NULL	7/13/2022	Series C	United States	120	1
	100 Thieves	Los Angeles	Retail	NULL	NULL	1/10/2023	Series C	United States	120	1
	10X Genomics	SF Bay Area	Healthcare	100	0.08	8/4/2022	Post-IPO	United States	242	1
	1stdibs	New York City	Retail	70	0.17	4/2/2020	Series D	United States	253	1
	2TM	Sao Paulo	Crypto	90	0.12	6/1/2022	Unknown	Brazil	250	1
	2TM	Sao Paulo	Crypto	100	0.15	9/1/2022	Unknown	Brazil	250	1
	2U	Washington D.C.	Education	NULL	0.2	7/28/2022	Post-IPO	United States	426	1
	54gene	Washington D.C.	Healthcare	95	0.3	8/29/2022	Series B	United States	44	1
	5B Solar	Sydney	Energy	NULL	0.25	6/3/2022	Series A	Australia	12	1
	Acence	SF Bay Area	Color	150	0.1	10/12/2022	Series F	United States	476	1

Data Cleaning Project

```
98    -- Standardizing data
99
100 • UPDATE layoffs_staging1
101   SET company = TRIM(company);
102
103 • SELECT DISTINCT industry
104   FROM layoffs_staging1
105   ORDER BY industry;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	industry			
▶	NULL			
	Aerospace			
	Construction			
	Consumer			
	Crypto			
	Crypto Currency			
	CryptoCurrency			
	Data			
	Education			
	Energy			
	Fin-Tech			
	Finance			

Data Cleaning Project

```
107 • SELECT *
108   FROM layoffs_staging1
109 WHERE industry LIKE 'Crypto%';
110
```

Result Grid										
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	2TM	Sao Paulo	Crypto	90	0.12	6/1/2022	Unknown	Brazil	250	1
	2TM	Sao Paulo	Crypto	100	0.15	9/1/2022	Unknown	Brazil	250	1
	Abra	SF Bay Area	Crypto	12	0.05	6/30/2022	Series C	United States	106	1
	Amber Group	Hong Kong	Crypto	NULL	0.1	9/9/2022	Series B	Hong Kong	328	1
	Autograph	Los Angeles	Crypto	NULL	NULL	12/16/2022	Series B	United States	205	1
	Bakkt	Atlanta	Crypto	NULL	0.15	12/8/2022	Post-IPO	United States	932	1
	Banxa	Melbourne	Crypto	70	0.3	6/27/2022	Post-IPO	Australia	13	1
	Bitfarms	Quebec	Crypto	NULL	NULL	4/6/2020	Post-IPO	Canada	25	1
	Bitfront	SF Bay Area	Crypto	NULL	1	11/29/2022	Unknown	United States	NULL	1
	BitGo	SF Bay Area	Crypto	NULL	0.12	4/17/2020	Series B	United States	69	1
	BitMEX	Non-U.S.	Crypto	NULL	0.3	11/2/2022	Seed	Seychelles	0	1
	BitMEX	Non-U.S.	Crypto	75	0.25	4/4/2022	Seed	Seychelles	0	1
	BitOasis	Dubai	Crypto	9	0.05	6/19/2022	Series B	United Arab Emirates	30	1
	Bitpanda	Vienna	Crypto	270	0.27	6/24/2022	Series C	Austria	546	1
	Bitso	Mexico City	Crypto	80	0.11	5/26/2022	Series C	Mexico	378	1
	Bitso	Mexico City	Crypto	100	NULL	11/29/2022	Series C	Mexico	378	1
	Bittrex	Seattle	Crypto	80	NULL	2/2/2023	Unknown	United States	NULL	1

Data Cleaning Project

```
111 • UPDATE layoffs_staging1
112     SET industry = 'Crypto'
113     WHERE industry LIKE 'Crypto%';
114
115 • SELECT *
116     FROM layoffs_staging1
117     WHERE industry LIKE '';
118
```

Result Grid											<input type="checkbox"/>
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num	
▶	Airbnb	SF Bay Area		30	NULL	3/3/2023	Post-IPO	United States	6400	1	
	Carvana	Phoenix		2500	0.12	5/10/2022	Post-IPO	United States	1600	1	
	Juul	SF Bay Area		400	0.3	11/10/2022	Unknown	United States	1500	1	

Data Cleaning Project

```
120 • SELECT DISTINCT location  
121   FROM layoffs_staging1  
122   ORDER BY 1;  
123
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	location			
▶	Accra			
	Ahmedabad			
	Albany			
	Amsterdam			
	Ann Arbor			
	Athens			
	Atlanta			
	Auckland			
	Austin			
	Baltimore			
	Bangkok			
	Barcelona			
	Baton Rouge			
	Beau Vallon			

Data Cleaning Project

```
124 • UPDATE layoffs_staging1  
125     SET industry = TRIM(industry);  
126  
127 • SELECT DISTINCT country  
128     FROM layoffs_staging1  
129     ORDER BY 1;  
130
```

| Result Grid | Filter Rows: | Export: Wrap Cell Content:

country
Argentina
Australia
Austria
Bahrain
Belgium
Brazil
Bulgaria
Canada
Chile
China
Colombia
Czech Republic
Denmark

Data Cleaning Project

```
131 • UPDATE layoffs_staging1
132   SET country = TRIM(country);
133
134 • UPDATE layoffs_staging1
135   SET country = 'United States'
136   WHERE country LIKE 'United States%';
137
138 • SELECT *
139   FROM layoffs_staging1
140   WHERE country LIKE 'United States'
141   ORDER BY 1;
```

Result Grid										
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	100 Thieves	Los Angeles	Consumer	12	NULL	7/13/2022	Series C	United States	120	1
	100 Thieves	Los Angeles	Retail	NULL	NULL	1/10/2023	Series C	United States	120	1
	10X Genomics	SF Bay Area	Healthcare	100	0.08	8/4/2022	Post-IPO	United States	242	1
	1stdibs	New York City	Retail	70	0.17	4/2/2020	Series D	United States	253	1
	2U	Washington D.C.	Education	NULL	0.2	7/28/2022	Post-IPO	United States	426	1
	54gene	Washington D.C.	Healthcare	95	0.3	8/29/2022	Series B	United States	44	1
	6sense	SF Bay Area	Sales	150	0.1	10/12/2022	Series E	United States	426	1
	80 Acres Farms	Cincinnati	Food	NULL	0.1	1/18/2023	Unknown	United States	275	1
	8x8	SF Bay Area	Support	155	0.07	1/18/2023	Post-IPO	United States	253	1
	8x8	SF Bay Area	Support	200	0.09	10/4/2022	Post-IPO	United States	253	1
	98point6	Seattle	Healthcare	NULL	0.1	7/21/2022	Series E	United States	247	1

Data Cleaning Project

```
143 •   SELECT `date`  
144     FROM layoffs_staging1;
```

```
145
```

	date
▶	12/16/2022
	7/25/2022
	11/17/2022
	1/27/2023
	7/13/2022
	1/10/2023
	8/4/2022
	4/2/2020
	6/1/2022
	9/1/2022
	7/28/2022
	8/29/2022
	6/3/2022
	10/12/2022
	1/18/2023

layoffs_staging1 16 ×

Data Cleaning Project

```
146 • UPDATE layoffs_staging1  
147     SET `date` = STR_TO_DATE(`date`, '%m/%d/%Y');  
148  
149 • ALTER TABLE layoffs_staging1  
150     MODIFY `date` DATE;  
151  
152 • SELECT `date`  
153     FROM layoffs_staging1;  
154
```

Result Grid	
	date
▶	2022-12-16
	2022-07-25
	2022-11-17
	2023-01-27
	2022-07-13
	2023-01-10
	2022-08-04
	2020-04-02
	2022-06-01
	2022-09-01
	2022-07-28
	2022-08-29

Data Cleaning Project

```
155 -- Handling Blanks and Nulls  
156  
157 • SELECT *  
158   FROM layoffs_staging1;  
159  
160  
161 • SELECT DISTINCT industry  
162   FROM layoffs_staging1  
163   ORDER BY 1;  
164
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

industry
NULL
Aerospace
Construction
Consumer
Crypto
Data
Education
Energy
Fin-Tech
Finance
Fitness
Food

Data Cleaning Project

```
167   FROM layoffs_staging1  
168 WHERE  
169     industry IS NULL  
170 OR  
171     industry = '';  
172
```

Result Grid										
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	Airbnb	SF Bay Area		30	NULL	2023-03-03	Post-IPO	United States	6400	1
	Bally's Interactive	Providence	NULL		NULL	0.15	2023-01-18	Post-IPO	United States	946
	Carvana	Phoenix		2500	0.12	2022-05-10	Post-IPO	United States	1600	1

```
173 • SELECT *  
174   FROM layoffs_staging1  
175 WHERE company = 'Airbnb';  
176
```

Result Grid										
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	Airbnb	SF Bay Area		30	NULL	2023-03-03	Post-IPO	United States	6400	1
	Airbnb	SF Bay Area	Travel	1900	0.25	2020-05-05	Private Equity	United States	5400	1

Data Cleaning Project

```
182 • UPDATE layoffs_staging1
183     SET industry = NULL
184     WHERE industry = '';
185
186 • SELECT t1.industry, t2.industry
187     FROM layoffs_staging1 AS t1
188     JOIN layoffs_staging1 AS t2
189     ON (t1.company = t2.company)
190     AND
191     t1.location = t2.location)
192     WHERE
193     ((t1.industry IS NULL OR t1.industry = '')
194     AND
195     t2.industry IS NOT NULL);
196
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	industry	industry
▶	HULL	Travel
	HULL	Transportation
	HULL	Transportation
	HULL	Consumer

Result 23 ×

Data Cleaning Project

```
199 • UPDATE layoffs_staging1 AS t1
200   JOIN layoffs_staging1 AS t2
201     ON (t1.company = t2.company
202       AND t1.location = t2.location)
203   SET t1.industry = t2.industry
204   WHERE ((t1.industry IS NULL OR t1.industry = '')
205     AND
206       t2.industry IS NOT NULL);
207
208 • SELECT * FROM layoffs_staging1
209 WHERE
210   total_laid_off IS NULL
211   AND percentage_laid_off IS NULL;
```

Result Grid										
<input type="checkbox"/> Filter Rows: <input type="text"/> Export: <input type="button"/> Wrap Cell Content: <input type="checkbox"/>										
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions	row_num
▶	E Inc.	Toronto	Transportation	NULL	NULL	2022-12-16	Post-IPO	Canada	NULL	1
	100 Thieves	Los Angeles	Retail	NULL	NULL	2023-01-10	Series C	United States	120	1
	Accolade	Seattle	Healthcare	NULL	NULL	2023-03-03	Post-IPO	United States	458	1
	Ada	Toronto	Support	NULL	NULL	2023-02-01	Series C	Canada	190	1
	Adara	SF Bay Area	Travel	NULL	NULL	2020-03-31	Series C	United States	67	1
	Addi	Bogota	Finance	NULL	NULL	2022-06-14	Series C	Colombia	376	1
	AirMap	Los Angeles	Aerospace	NULL	NULL	2020-04-30	Unknown	United States	75	1
	Airtasker	Sydney	Consumer	NULL	NULL	2022-07-04	Series C	Australia	26	1

Data Cleaning Project

```
218    -- Removing Unwanted Rows and Columns
219
220 • DELETE
221   FROM layoffs_staging1
222   WHERE
223     total_laid_off IS NULL
224   AND
225     percentage_laid_off IS NULL;
226
227 • ALTER TABLE layoffs_staging1
228   DROP COLUMN row_num;
```

```
229
230
231 • SELECT *
232   FROM layoffs_staging1;
233
```

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Included Health	SF Bay Area	Healthcare	NULL	0.06	2022-07-25	Series E	United States	272
&Open	Dublin		Marketing	9	0.09	2022-11-17	Series A	Ireland	35
#Paid	Toronto		Marketing	19	0.17	2023-01-27	Series B	Canada	21
100 Thieves	Los Angeles		Consumer	12	NULL	2022-07-13	Series C	United States	120
10X Genomics	SF Bay Area		Healthcare	100	0.08	2022-08-04	Post-IPO	United States	242
1stdibs	New York City		Retail	70	0.17	2020-04-02	Series D	United States	253
2TM	Sao Paulo		Crypto	90	0.12	2022-06-01	Unknown	Brazil	250
2TM	Sao Paulo		Crypto	100	0.15	2022-09-01	Unknown	Brazil	250
2U	Washington D.C.		Education	NULL	0.2	2022-07-28	Post-IPO	United States	426
54gene	Washington D.C.		Healthcare	95	0.3	2022-08-29	Series B	United States	44
5B Solar	Sydney		Energy	NULL	0.25	2022-06-03	Series A	Australia	12
6sense	SF Bay Area		Sales	150	0.1	2022-10-12	Series E	United States	426
80 Acres Farms	Cincinnati		Food	NULL	0.1	2023-01-18	Unknown	United States	275
8x8	SF Bay Area		Support	155	0.07	2023-01-18	Post-IPO	United States	253

Exploratory Data Analysis (EDA)

```
1 -- EDA
2
3 -- Here we are just going to explore the data and find trends or patterns or anything interesting like outliers
4
5 -- normally when you start the EDA process you have some idea of what you're looking for
6
7 -- with this info we are just going to look around and see what we find!
8
9 • USE world_layoffs;
10
11 • SELECT *
12 FROM layoffs_staging1;
```

Result Grid									
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Included Health	SF Bay Area	Healthcare	NULL	0.06	2022-07-25	Series E	United States	272
&Open		Dublin	Marketing	9	0.09	2022-11-17	Series A	Ireland	35
#Paid		Toronto	Marketing	19	0.17	2023-01-27	Series B	Canada	21
100 Thieves		Los Angeles	Consumer	12	NULL	2022-07-13	Series C	United States	120
10X Genomics		SF Bay Area	Healthcare	100	0.08	2022-08-04	Post-IPO	United States	242
1stdibs		New York City	Retail	70	0.17	2020-04-02	Series D	United States	253
2TM		Sao Paulo	Crypto	90	0.12	2022-06-01	Unknown	Brazil	250
2TM		Sao Paulo	Crypto	100	0.15	2022-09-01	Unknown	Brazil	250
2U		Washington D.C.	Education	NULL	0.2	2022-07-28	Post-IPO	United States	426
54gene		Washington D.C.	Healthcare	95	0.3	2022-08-29	Series B	United States	44

Exploratory Data Analysis (EDA)

```
14    -- EASIER QUERIES  
15  
16 • SELECT MAX(total_laid_off)  
17   FROM layoffs_staging1;  
18
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	MAX(total_laid_off)			
▶	12000			

```
19  
19 • SELECT MAX(percentage_laid_off)  
20   FROM layoffs_staging1;  
21
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	MAX(percentage_laid_off)			
▶	1			

Exploratory Data Analysis (EDA)

```
22    -- Looking at Percentage to see how big these layoffs were
23
24 • SELECT MAX(percentage_laid_off), MIN(percentage_laid_off)
25   FROM layoffs_staging1
26   WHERE percentage_laid_off IS NOT NULL;
27
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	MAX(percentage_laid_off)	MIN(percentage_laid_off)
▶	1	0

Exploratory Data Analysis (EDA)

```
28 -- Which companies had 1 which is basically 100 percent of they company laid off
29 • SELECT *
30 FROM layoffs_staging1
31 WHERE percentage_laid_off = 1;
32
33 -- these are mostly startups it looks like who all went out of business during this time
34
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Ahead	SF Bay Area	Healthcare	44	1	2022-04-14	Unknown	United States	9
	Airlift	Lahore	Logistics	NULL	1	2022-07-12	Series B	Pakistan	109
	Airy Rooms	Jakarta	Travel	NULL	1	2020-05-07	Unknown	Indonesia	NULL
	Amplero	Seattle	Marketing	17	1	2020-03-29	Series B	United States	25
	Arch Oncology	Brisbane	Healthcare	NULL	1	2023-01-13	Series C	United States	155
	Assure	Salt Lake City	Finance	NULL	1	2022-11-23	Seed	United States	2
	Atsu	Seattle	Infrastructure	6	1	2020-04-10	Unknown	United States	1
	Aura Financial	SF Bay Area	Finance	NULL	1	2021-01-11	Unknown	United States	584
	Automatic	SF Bay Area	Transportation	NULL	1	2020-05-01	Acquired	United States	24
	Awok	Dubai	Retail	NULL	1	2020-09-02	Series A	United Arab Emirates	30
	BeyondMinds	Tel Aviv	Data	65	1	2022-05-23	Series A	Israel	16
	Bitfront	SF Bay Area	Crypto	NULL	1	2022-11-29	Unknown	United States	NULL
	BlockFi	New York City	Crypto	NULL	1	2022-11-28	Series E	United States	1000
	Blueprint	Denver	Education	137	1	2020-05-26	Acquired	United States	108
	Bridge Connector	Nashville	Healthcare	154	1	2020-11-17	Series B	United States	45
	Britishvolt	London	Transportation	206	1	2023-01-17	Unknown	United Kingdom	2400

Exploratory Data Analysis (EDA)

```
35    -- if we order by funds_raised_millions we can see how big some of these companies were
36 • SELECT *
37   FROM layoffs_staging1
38 WHERE percentage_laid_off = 1
39 ORDER BY funds_raised_millions DESC;
40
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Britishvolt	London	Transportation	206	1	2023-01-17	Unknown	United Kingdom	2400
	Quibi	Los Angeles	Media	NULL	1	2020-10-21	Private Equity	United States	1800
	Deliveroo Australia	Melbourne	Food	120	1	2022-11-15	Post-IPO	Australia	1700
	Katerra	SF Bay Area	Construction	2434	1	2021-06-01	Unknown	United States	1600
	BlockFi	New York City	Crypto	NULL	1	2022-11-28	Series E	United States	1000
	Aura Financial	SF Bay Area	Finance	NULL	1	2021-01-11	Unknown	United States	584
	Openpay	Melbourne	Finance	83	1	2023-02-07	Post-IPO	Australia	299
	Pollen	London	Marketing	NULL	1	2022-08-10	Series C	United Kingdom	238
	Simple Feast	Copenhagen	Food	150	1	2022-09-07	Unknown	Denmark	173
	Arch Oncology	Brisbane	Healthcare	NULL	1	2023-01-13	Series C	United States	155
	Motif Investing	SF Bay Area	Finance	NULL	1	2020-04-18	Series E	United States	126
	CommonBond	New York City	Finance	NULL	1	2022-09-09	Series D	United States	125
	Fast	SF Bay Area	Finance	NULL	1	2022-04-05	Series B	United States	124
	Reali	SF Bay Area	Real Estate	140	1	2022-08-24	Series B	United States	117

Exploratory Data Analysis (EDA)

```
41    -- BritishVolt looks like an EV company, Quibi! - wow raised like 2 billion dollars and went under - ouch
42
43    -- Companies with the biggest single Layoff
44 •  SELECT company, total_laid_off
45    FROM layoffs_staging1
46    ORDER BY 2 DESC
47    LIMIT 5;
48    -- now that's just on a single day
```

Result Grid									
	company	location	industry	total_laid_off	percentage_laid_off	date	stage	country	funds_raised_millions
▶	Britishvolt	London	Transportation	206	1	2023-01-17	Unknown	United Kingdom	2400
	Quibi	Los Angeles	Media	NULL	1	2020-10-21	Private Equity	United States	1800
	Deliveroo Australia	Melbourne	Food	120	1	2022-11-15	Post-IPO	Australia	1700
	Katerra	SF Bay Area	Construction	2434	1	2021-06-01	Unknown	United States	1600
	BlockFi	New York City	Crypto	NULL	1	2022-11-28	Series E	United States	1000
	Aura Financial	SF Bay Area	Finance	NULL	1	2021-01-11	Unknown	United States	584
	Openpay	Melbourne	Finance	83	1	2023-02-07	Post-IPO	Australia	299
	Pollen	London	Marketing	NULL	1	2022-08-10	Series C	United Kingdom	238
	Simple Feast	Copenhagen	Food	150	1	2022-09-07	Unknown	Denmark	173
	Arch Oncology	Brisbane	Healthcare	NULL	1	2023-01-13	Series C	United States	155
	Motif Investing	SF Bay Area	Finance	NULL	1	2020-04-18	Series E	United States	126
	CommonBond	New York City	Finance	NULL	1	2022-09-09	Series D	United States	125
	Fast	SF Bay Area	Finance	NULL	1	2022-04-05	Series B	United States	124

Exploratory Data Analysis (EDA)

```
57    -- by location
58 •  SELECT location, SUM(total_laid_off) laid_off
59   FROM layoffs_staging1
60   GROUP BY location
61   ORDER BY 2 DESC
62   LIMIT 10;
63
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	location	laid_off
▶	SF Bay Area	125551
	Seattle	34743
	New York City	29364
	Bengaluru	21587
	Amsterdam	17140
	Stockholm	11217
	Boston	10726
	Sao Paulo	9081
	Austin	8980
	Chicago	6419

Result 8 ×

Exploratory Data Analysis (EDA)

```
64    -- this is total in the past 3 years or in the dataset
65 • SELECT country, SUM(total_laid_off) laid_off
66   FROM layoffs_staging1
67   GROUP BY country
68   ORDER BY 2 DESC
69   LIMIT 10;
70
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	country	laid_off
▶	United States	256420
	India	35793
	Netherlands	17220
	Sweden	11264
	Brazil	10391
	Germany	8701
	United Kingdom	6398
	Canada	6319
	Singapore	5995
	China	5905

Exploratory Data Analysis (EDA)

```
71 •  SELECT YEAR(date) AS `year`, SUM(total_laid_off) laid_off  
72      FROM layoffs_staging1  
73      GROUP BY `year`  
74      ORDER BY 2 DESC;  
75
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	year	laid_off
▶	2022	160322
	2023	125677
	2020	80998
	2021	15823
	NULL	500

Result 10 ×

Exploratory Data Analysis (EDA)

```
76 •   SELECT industry, SUM(total_laid_off) laid_off  
77     FROM layoffs_staging1  
78     GROUP BY industry  
79     ORDER BY 2 DESC  
80     LIMIT 10;  
81
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	industry	laid_off
▶	Consumer	45182
	Retail	43613
	Other	36209
	Transportation	33548
	Finance	28344
	Healthcare	25894
	Food	22855
	Real Estate	17565
	Travel	17159
	Hardware	13828

Result 12 ×

Exploratory Data Analysis (EDA)

```
82 •   SELECT stage, SUM(total_laid_off) laid_off  
83     FROM layoffs_staging1  
84     GROUP BY stage  
85     ORDER BY 2 DESC  
86     LIMIT 10;  
87
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	stage	laid_off
▶	Post-IPO	204073
	Unknown	40716
	Acquired	27496
	Series C	20017
	Series D	19225
	Series B	15311
	Series E	12697
	Series F	9932
	Private Equity	7957
	Series H	7244

Result 13 ×

Exploratory Data Analysis (EDA)

```
89    -- Rolling Sum of Lay offs via months.  
90 • SELECT SUBSTRING(`date`, 1, 7) AS `Months`, SUM(total_laid_off) AS laid_off  
91   FROM layoffs_staging1  
92  WHERE SUBSTRING(`date`, 1, 7) IS NOT NULL  
93  GROUP BY `Months`  
94  ORDER BY `Months`;  
95  
96
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	Months	laid_off
▶	2020-03	9628
	2020-04	26710
	2020-05	25804
	2020-06	7627
	2020-07	7112
	2020-08	1969
	2020-09	609
	2020-10	450
	2020-11	237
	2020-12	852
	2021-01	6813

Result 14

Exploratory Data Analysis (EDA)

```
97      -- now use it in a CTE so we can query off of it
98 •  WITH rolling_cte AS
99   (
100     SELECT SUBSTRING(`date`, 1, 7) AS `Months`, SUM(total_laid_off) AS laid_off
101    FROM layoffs_staging1
102   WHERE SUBSTRING(`date`, 1, 7) IS NOT NULL
103   GROUP BY `Months`
104   ORDER BY `Months`
105 )
106   SELECT `Months`, laid_off,
107   SUM(laid_off) OVER(ORDER BY `Months`) AS rolling_total_off
108   FROM rolling_cte;
109
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Months	laid_off	rolling_total_off
▶	2020-03	9628	9628
	2020-04	26710	36338
	2020-05	25804	62142
	2020-06	7627	69769
	2020-07	7112	76881
	2020-08	1969	78850
	2020-09	609	79459
	2020-10	450	79909
	2020-11	237	80146

Exploratory Data Analysis (EDA)

```
111  -- TOUGHER QUERIES-----  
112  
113  -- Earlier we looked at Companies with the most Layoffs. Now let's look at that per year. It's a little more difficult.  
114  -- I want to look at  
115  
116  
117 • SELECT company, `date`, SUM(total_laid_off)  
118  FROM layoffs_staging1  
119  GROUP BY company, `date`  
120  ORDER BY 3 DESC  
121  ;  
122
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	company	date	SUM(total_laid_off)
▶	Google	2023-01-20	12000
	Meta	2022-11-09	11000
	Amazon	2022-11-16	10000
	Microsoft	2023-01-18	10000
	Ericsson	2023-02-24	8500
	Amazon	2023-01-04	8000
	Salesforce	2023-01-04	8000
	Dell	2023-02-06	6650
	Philips	2023-01-30	6000

Result Grid | Form Editor | Field Types

Exploratory Data Analysis (EDA)

```
124 • WITH Company_year (company, years, total_laid_off) AS
125   (
126     SELECT company, YEAR(`date`), SUM(total_laid_off)
127     FROM layoffs_staging1
128     GROUP BY company, YEAR(`date`)
129   ),
130   Company_year_rank AS
131   (
132     SELECT *,
133     DENSE_RANK() OVER(PARTITION BY years ORDER BY total_laid_off DESC) AS Ranking
134     FROM Company_year
135     WHERE years IS NOT NULL
136     ORDER BY Ranking
137   )
138   SELECT *
139   FROM Company_year_rank
140   WHERE Ranking <= 5
141   ORDER BY years ASC, total_laid_off DESC;
```

	company	years	total_laid_off	Ranking
▶	Uber	2020	7525	1
	Booking.com	2020	4375	2
	Groupon	2020	2800	3
	Swiggy	2020	2250	4
	Airbnb	2020	1900	5
	Bytedance	2021	3600	1
	Katerra	2021	2434	2
	Zillow	2021	2000	3
	Instacart	2021	1877	4
	WhiteHat Jr	2021	1800	5
	Meta	2022	11000	1
	Amazon	2022	10150	2
	Cisco	2022	4100	3
	Peloton	2022	4084	4
	Carvana	2022	4000	5
	Philips	2022	4000	5
	Google	2023	12000	1
	Microsoft	2023	10000	2
	Ericsson	2023	8500	3
	Amazon	2023	8000	4



Thank you all for
going through this
campaign brief.
Best of luck!

 SABBIR UDDIN AKASH