Project Title: Layoffs Data Cleaning & Feature Engineering Report
TOOL: SQL SERVER MANAGEMENT STUDIO (SSMS)
Author: Akeem D Analyst

Project Overview:
This project focuses on cleaning and preparing the Layoffs dataset for predictive modeling and further analysis.
The goal is to make the dataset accurate, consistent, and ready for insights that can help identify if a company or individual is vulnerable to layoffs.

Objectives:
 •   Handle missing and inconsistent values.
 •   Standardize text, date, and numeric formats.
 •   Create clean, reliable features for modeling and reporting.

```
/*=============================================================================
                    DATA CLEANING AND FEATURE ENGINEERING
=============================================================================*/
CREATE DATABASE Layoff
GO
USE Layoff
GO
SELECT * FROM layoffs
```

Data Import & Schema Creation
 •   Loaded raw Layoffs dataset into SQL schema.
 •   Defined proper data types for numeric, text, and date columns.

CREATE SCHEMA
```
CREATE SCHEMA stg
```

Insert raw data inot the schema
```
SELECT * INTO stg.Layoff FROM layoffs
```

FULL RAW TABLE VIEW

```
SELECT * FROM stg.Layoff
```

Results | Messages

	company	location	total_laid_off	date	percentage_laid_off	industry	source	stage	funds_raised	country	date_added
1	GamesKraft	Bengaluru,Non-U.S.	120	2025-09-18	NULL	Consumer	https://inc42.com/buzz/now-gameskraft-lays-off-120-...	Unknown	NULL	India	2025-09-25
2	ZipRecruiter	Tel Aviv,Non-U.S.	80	2025-09-16	NULL	Recruiting	https://www.calcalistech.com/ctechnews/article/pw...	Post-IPO	769.00	United States	2025-09-16
3	Fiverr	Tel Aviv,Non-U.S.	250	2025-09-15	30%	Other	https://www.wsj.com/business/fiverr-to-cut-about-25...	Post-IPO	111.00	Israel	2025-09-16
4	Hike	New Delhi,Non-U.S.	NULL	2025-09-13	100%	Consumer	https://techcrunch.com/2025/09/13/hike-once-a-un...	Unknown	261.00	India	2025-09-15
5	xAI	SF Bay Area	500	2025-09-12	NULL	AI	https://www.businessinsider.com/elon-musk-xai-layof...	Unknown	22700.00	United States	2025-09-15
6	Zupee	New Delhi,Non-U.S.	170	2025-09-11	30%	Consumer	https://yourstory.com/2025/09/zupee-employees-rea...	Series B	121.00	India	2025-09-15
7	Atlassian	Sydney,Non-U.S.	200	2025-09-10	NULL	Other	https://www.ziptone.nl/en/nieuws/atlassian-schrapt-...	Post-IPO	210.00	Australia	2025-09-18
8	Microsoft	Seattle	42	2025-09-08	NULL	Other	https://www.bizjournals.com/seattle/news/2025/09/...	Post-IPO	1.00	United States	2025-09-08
9	Rivian	Los Angeles	200	2025-09-05	1%	Transpo...	https://www.latimes.com/business/story/2025-09-08...	Post-IPO	10700.00	United States	2025-09-08
10	Scope3	New York City	NULL	2025-09-05	NULL	Energy	https://www.adweek.com/media/scope3-lays-off-sal...	Series B	45.00	United States	2025-09-08
11	Head Digit...	Hyderabad,Non-U...	500	2025-09-04	NULL	Consumer	https://entrackr.com/news/a23-parent-lays-off-500-e...	Private ...	74.00	India	2025-09-08
12	Salesforce	SF Bay Area	262	2025-09-04	NULL	Sales	https://www.kron4.com/news/bay-area/salesforce-l...	Post-IPO	65.00	United States	2025-09-08
13	Oracle	SF Bay Area	254	2025-09-04	NULL	Other	https://www.kron4.com/news/technology-ai/oracle-...	Post-IPO	NULL	United States	2025-09-08
14	GupShup	SF Bay Area	100	2025-09-04	NULL	Other	https://inc42.com/buzz/exclusive-gupshup-lays-off-1...	Series F	484.00	India	2025-09-08
15	Bobble AI	New Delhi,Non-U.S.	50	2025-09-04	NULL	Consumer	https://entrackr.com/exclusive/exclusive-bobble-ai-l...	Unknown	59.00	India	2025-09-08
16	Oracle	Seattle	101	2025-09-03	NULL	Other	https://www.seattletimes.com/business/cloud-comp...	Post-IPO	NULL	United States	2025-09-08
17	Salesforce	Seattle	93	2025-09-03	NULL	Sales	https://www.seattletimes.com/business/seattle-area-...	Post-IPO	65.00	United States	2025-09-08
18	Salesforce	Dublin,Non-U.S.	30	2025-09-03	NULL	Sales	https://www.thejournal.ie/salesforce-ireland-redunda...	Post-IPO	65.00	United States	2025-09-08
19	The Gist	Tel Aviv,Non-U.S.	NULL	2025-09-03	100%	Other	https://www.calcalistech.com/ctechnews/article/jey...	Seed	7.00	Israel	2025-09-08
20	Vimeo	New York City	NULL	2025-09-03	10%	Consumer	https://www.linkedin.com/posts/phmoyer_today-we-...	Post-IPO	450.00	United States	2025-09-08
21	Oracle	Kansas City	NULL	2025-09-02	NULL	Other	https://www.kmbc.com/article/oracle-layoffs-kansas-...	Post-IPO	NULL	United States	2025-09-08
22	Games 24x7	Mumbai,Non-U.S.	400	2025-09-01	NULL	Consumer	https://www.peoplematters.in/news/strategic-hr/afte...	Unknown	75.00	India	2025-09-02
23	Mobile Pre...	Bengaluru,Non-U.S.	300	2025-09-01	NULL	Consumer	https://timesofindia.indiatimes.com/technology/tech-...	Series E	375.00	India	2025-09-02
24	Krutrim	Bengaluru,Non-U.S.	50	2025-09-01	NULL	AI	https://www.techinasia.com/news/olas-krutrim-cuts-...	Unknown	304.00	India	2025-09-02
25	Salesforce	SF Bay Area	4000	2025-08-31	NULL	Sales	https://www.businessinsider.com/marc-benioff-says-s...	Post-IPO	65.00	United States	2025-09-02

Before
 •   The raw data contained nulls, inconsistent text, and mixed formats.

Standardlize tect
```
SELECT
```

```sql
        UPPER(TRIM(Company)) AS Company,
        UPPER(TRIM(  Location)) AS Location,
        UPPER(TRIM(industry)) AS industry,
        UPPER(TRIM(Stage)) AS Stage,
        UPPER(TRIM(country)) AS Ccountry
FROM stg.Layoff
```

Results | Messages

	Company	Location	industry	Stage	Ccountry
1	GAMESKRAFT	BENGALURU,NON-U.S.	CONSUMER	UNKNOWN	INDIA
2	ZIPRECRUITER	TEL AVIV,NON-U.S.	RECRUITING	POST-IPO	UNITED STATES
3	FIVERR	TEL AVIV,NON-U.S.	OTHER	POST-IPO	ISRAEL
4	HIKE	NEW DELHI,NON-U.S.	CONSUMER	UNKNOWN	INDIA
5	XAI	SF BAY AREA	AI	UNKNOWN	UNITED STATES
6	ZUPEE	NEW DELHI,NON-U.S.	CONSUMER	SERIES B	INDIA
7	ATLASSIAN	SYDNEY,NON-U.S.	OTHER	POST-IPO	AUSTRALIA
8	MICROSOFT	SEATTLE	OTHER	POST-IPO	UNITED STATES
9	RIVIAN	LOS ANGELES	TRANSPO...	POST-IPO	UNITED STATES
10	SCOPE3	NEW YORK CITY	ENERGY	SERIES B	UNITED STATES
11	HEAD DIGITA...	HYDERABAD,NON-U.S.	CONSUMER	PRIVATE ...	INDIA
12	SALESFORCE	SF BAY AREA	SALES	POST-IPO	UNITED STATES
13	ORACLE	SF BAY AREA	OTHER	POST-IPO	UNITED STATES
14	GUPSHUP	SF BAY AREA	OTHER	SERIES F	INDIA
15	BOBBLE AI	NEW DELHI,NON-U.S.	CONSUMER	UNKNOWN	INDIA
16	ORACLE	SEATTLE	OTHER	POST-IPO	UNITED STATES
17	SALESFORCE	SEATTLE	SALES	POST-IPO	UNITED STATES
18	SALESFORCE	DUBLIN,NON-U.S.	SALES	POST-IPO	UNITED STATES
19	THE GIST	TEL AVIV,NON-U.S.	OTHER	SEED	ISRAEL
20	VIMEO	NEW YORK CITY	CONSUMER	POST-IPO	UNITED STATES
21	ORACLE	KANSAS CITY	OTHER	POST-IPO	UNITED STATES
22	GAMES 24X7	MUMBAI,NON-U.S.	CONSUMER	UNKNOWN	INDIA
23	MOBILE PRE...	BENGALURU,NON-U.S.	CONSUMER	SERIES E	INDIA
24	KRUTRIM	BENGALURU,NON-U.S.	AI	UNKNOWN	INDIA
25	SALESFORCE	SF BAY AREA	SALES	POST-IPO	UNITED STATES

Data type
```sql
SELECT
        CAST( date_added AS DATE ) AS date_added
FROM stg.Layoff
```

Feature Engineering
```sql
SELECT
        YEAR(date_added) AS YEAR_date_added,
        MONTH(date_added) AS MONTH_date_added,
        DAY(date_added) AS DAY_date_added
FROM stg.Layoff
```

Results | Messages

	YEAR_date_added	MONTH_date_added	DAY_date_added
1	2025	9	25
2	2025	9	16
3	2025	9	16
4	2025	9	15
5	2025	9	15
6	2025	9	15
7	2025	9	18
8	2025	9	8
9	2025	9	8
10	2025	9	8
11	2025	9	8
12	2025	9	8
13	2025	9	8
14	2025	9	8
15	2025	9	8
16	2025	9	8
17	2025	9	8
18	2025	9	8
19	2025	9	8
20	2025	9	8
21	2025	9	8
22	2025	9	2
23	2025	9	2
24	2025	9	2
25	2025	9	2

Feature Engineering
- • Extracted date parts (Year, Month, Day) for time-based analysis.

Remove duplicate
```sql
WITH CTE AS (
```

```sql
SELECT
    *,
    ROW_NUMBER() OVER( PARTITION BY Company, Location, industry, Stage, country, total_laid_off, percentage_laid_off,
    source, funds_raised ORDER BY date_added) AS Row_nm
FROM stg.Layoff
)
SELECT * FROM CTE
WHERE Row_nm = 1
```

Results | Messages

	company	location	total_laid_off	date	percentage_laid_off	industry	source	stage	funds_raised	country	date_added	Row_nm
1	#Paid	Toronto,Non-U.S.	19	2023-01-27	17%	Marketing	https://betakit.com/as-big-tech-makes-mass-layoffs-rece...	Series B	21.00	Canada	2023-01-28	1
2	&Open	Dublin,Non-U.S.	9	2022-11-17	9%	Marketing	https://www.irishtimes.com/technology/2022/11/17/gifti...	Series A	35.00	Ireland	2022-12-01	1
3	100 Thieves	Los Angeles	12	2022-07-13	NULL	Consumer	https://www.dexerto.com/esports/100-thieves-layoffs-so...	Series C	120.00	United States	2022-07-18	1
4	100 Thieves	Los Angeles	NULL	2023-01-10	NULL	Retail	https://www.dexerto.com/esports/100-thieves-hit-with-a...	Series C	120.00	United States	2023-01-12	1
5	10X Genomics	SF Bay Area	100	2022-08-04	8%	Healthcare	https://www.genomeweb.com/business-news/10x-geno...	Post-IPO	242.00	United States	2022-08-04	1
6	123Milhas	Belo Horizonte,...	NULL	2023-08-29	NULL	Travel	https://economia.uol.com.br/noticias/redacao/2023/08...	Unkno...	NULL	Brazil	2023-10-06	1
7	1K Kirana	Gurugram,Non-...	600	2023-04-04	40%	Retail	https://www.moneycontrol.com/news/business/startup/i...	Series B	NULL	India	2023-04-04	1
8	1stdibs	New York City	70	2020-04-02	17%	Retail	https://twitter.com/eringriffith/status/124614784135076...	Series D	253.00	United States	2020-04-08	1
9	23andMe	SF Bay Area	71	2023-08-08	11%	Healthcare	https://www.streetinsider.com/Corporate+News/23and...	Post-IPO	1100.00	United States	2023-08-08	1
10	23andMe	SF Bay Area	75	2023-06-09	9%	Healthcare	https://www.genomeweb.com/business-news/23andme...	Post-IPO	1100.00	United States	2023-06-09	1
11	23andMe	SF Bay Area	200	2024-11-11	40%	Healthcare	https://www.wsj.com/tech/biotech/23andme-to-cut-wor...	Post-IPO	1100.00	United States	2024-11-12	1
12	2TM	Sao Paulo,Non-...	90	2022-06-01	12%	Crypto	https://www.terra.com.br/noticias/tecnologia/2tm-dono-...	Unkno...	250.00	Brazil	2022-06-02	1
13	2TM	Sao Paulo,Non-...	100	2022-09-01	15%	Crypto	https://finance.yahoo.com/news/second-round-layoffs-b...	Unkno...	250.00	Brazil	2022-09-02	1
14	2U	Washington D.C.	NULL	2023-09-28	NULL	Education	https://2u.com/latest/organizational-changes-2u/	Post-IPO	426.00	United States	2023-09-29	1
15	2U	Washington D.C.	NULL	2024-12-04	NULL	Education	https://www.classcentral.com/report/2u-axes-trilogy-boo...	Post-IPO	426.00	United States	2024-12-07	1
16	2U	Washington D.C.	NULL	2024-01-22	NULL	Education	https://www.classcentral.com/report/2u-layoffs-2024/	Post-IPO	426.00	United States	2024-01-23	1
17	2U	Washington D.C.	NULL	2025-03-31	NULL	Education	https://www.classcentral.com/report/2u-layoffs-march-2...	Post-IPO	426.00	United States	2025-04-01	1
18	2U	Washington D.C.	NULL	2022-07-28	20%	Education	https://www.insidehighered.com/news/2022/08/01/onli...	Post-IPO	426.00	United States	2022-07-30	1
19	54gene	Washington D.C.	95	2022-08-29	30%	Healthcare	https://techcrunch.com/2022/08/29/african-genomics-s...	Series B	44.00	United States	2022-08-30	1
20	5B Solar	Sydney,Non-U.S.	NULL	2022-06-03	25%	Energy	https://www.news.com.au/finance/business/manufactu...	Series A	12.00	Australia	2022-06-03	1
21	6sense	SF Bay Area	150	2022-10-12	10%	Sales	https://www.moneycontrol.com/news/business/startup/...	Series E	426.00	United States	2022-10-14	1
22	7shifts	Saskatoon,Non...	30	2023-09-15	7%	Food	https://www.linkedin.com/feed/update/urn:li:activity:71...	Series C	131.00	Canada	2023-09-21	1
23	7Shifts	Saskatoon,Non...	68	2024-01-11	19%	Food	https://betakit.com/7shifts-cuts-19-percent-of-staff-in-ne...	Series C	131.00	Canada	2024-01-18	1
24	80 Acres Far...	Cincinnati	NULL	2023-01-18	10%	Food	https://www.bizjournals.com/cincinnati/inno/stories/ne...	Unkno...	275.00	United States	2023-01-19	1
25	888	Tel Aviv,Non-U...	NULL	2024-01-11	NULL	Consumer	https://www.calcalistech.com/ctechnews/article/skbqy...	Post-IPO	NULL	Israel	2024-01-13	1

<u>Exploratory Data Checks</u>
- Checked for duplicates and missing values.

```
/*=========================================================================
                            HANDLE NULL
========================================================================*/
```

<u>For the categorical</u>
```sql
SELECT
    COALESCE(Company, 'Unknown') AS Company,
    COALESCE(Location,'Unknown') AS Location,
    COALESCE(industry, 'Unknown') AS industry,
    COALESCE(Stage, 'Unknown') AS Stage,
    COALESCE(country, 'Unknown') AS Ccountry
FROM stg.Layoff
```

	Company	Location	industry	Stage	Ccountry
1	GamesKraft	Bengaluru,Non-U.S.	Consumer	Unknown	India
2	ZipRecrui...	Tel Aviv,Non-U.S.	Recruiting	Post-IPO	United ...
3	Fiverr	Tel Aviv,Non-U.S.	Other	Post-IPO	Israel
4	Hike	New Delhi,Non-U.S.	Consumer	Unknown	India
5	xAI	SF Bay Area	AI	Unknown	United ...
6	Zupee	New Delhi,Non-U.S.	Consumer	Series B	India
7	Atlassian	Sydney,Non-U.S.	Other	Post-IPO	Australia
8	Microsoft	Seattle	Other	Post-IPO	United ...
9	Rivian	Los Angeles	Transpo...	Post-IPO	United ...
10	Scope3	New York City	Energy	Series B	United ...
11	Head Digi...	Hyderabad,Non-U...	Consumer	Private ...	India
12	Salesforce	SF Bay Area	Sales	Post-IPO	United ...
13	Oracle	SF Bay Area	Other	Post-IPO	United ...
14	GupShup	SF Bay Area	Other	Series F	India
15	Bobble AI	New Delhi,Non-U.S.	Consumer	Unknown	India
16	Oracle	Seattle	Other	Post-IPO	United ...
17	Salesforce	Seattle	Sales	Post-IPO	United ...
18	Salesforce	Dublin,Non-U.S.	Sales	Post-IPO	United ...
19	The Gist	Tel Aviv,Non-U.S.	Other	Seed	Israel
20	Vimeo	New York City	Consumer	Post-IPO	United ...
21	Oracle	Kansas City	Other	Post-IPO	United ...
22	Games 24...	Mumbai,Non-U.S.	Consumer	Unknown	India
23	Mobile Pr...	Bengaluru,Non-U.S.	Consumer	Series E	India
24	Krutrim	Bengaluru,Non-U.S.	AI	Unknown	India
25	Salesforce	SF Bay Area	Sales	Post-IPO	United ...

```
/*=============================================================================
                              -- For the numeric
=============================================================================*/
```

Data Cleaning Steps
- Replaced missing numeric values with median (e.g., total_laid_off, percentage_laid_off & funds_raised).
- Cleaned percentage fields (removed % signs, converted to numeric).
- Added flag columns to track imputed values.

Find % missing for key columns

```sql
SELECT
    COUNT(*),
    SUM( CASE WHEN total_laid_off IS NULL THEN 1 ELSE 0 END) * 1.0/COUNT(*) AS total_laid_off_Missing,
    SUM( CASE WHEN percentage_laid_off IS NULL THEN 1 ELSE 0 END) * 1.0/COUNT(*) AS percentage_laid_off_Missing,
    SUM( CASE WHEN funds_raised IS NULL THEN 1 ELSE 0 END) * 1.0/COUNT(*) AS funds_raised_Missing
FROM stg.Layoff
```

⊞ Results 📄 Messages

	(No column name)	total_laid_off_Missing	percentage_laid_off_Missing	funds_raised_Missing
1	4171	0.347878206665	0.367298010069	0.111723807240

Check distribution (to see median & outliers) For total_laid_off

```sql
WITH MED AS (
SELECT
    PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY total_laid_off) OVER () AS Med_total_laid_off
FROM stg.Layoff
)
SELECT * FROM MED
WHERE Med_total_laid_off IS NOT NULL
```

⊞ Results 📄 Messages

	Med_total_laid_off
1	87
2	87
3	87
4	87
5	87
6	87
7	87
8	87
9	87
10	87
11	87
12	87

Check distribution (to see median & outliers) For percentage_laid_off

```sql
WITH CLEAN AS (
SELECT
```

```sql
                  TRY_CAST(REPLACE( percentage_laid_off, '%', '') AS decimal(10,2)) AS Pct_num
FROM STG.Layoff
),
MED AS (
        SELECT
                PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY Pct_num) OVER () AS Med_Pct
FROM CLEAN
)
SELECT * FROM CLEAN
```

Check distribution (to see median & outliers) For funds_raised

```sql
WITH MED AS (
SELECT
        PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY funds_raised) OVER () AS Med_funds_raised
FROM stg.Layoff
)
SELECT * FROM MED
WHERE Med_funds_raised IS NOT NULL
```

	Med_funds_raised
1	169
2	169
3	169
4	169
5	169
6	169
7	169
8	169
9	169
10	169
11	169
12	169

```sql
       /*===========================================================================
                                 -- CREATE VIEW
         =========================================================================*/
CREATE VIEW VW_LAYOFF AS
WITH CLEAN AS (
SELECT *,
       TRY_CAST(REPLACE( percentage_laid_off, '%', '') AS decimal(10,2)) AS Pct_num,
       ROW_NUMBER() OVER( PARTITION BY Company, Location, industry, Stage, country, total_laid_off, percentage_laid_off,
       source, funds_raised ORDER BY date_added) AS Row_nm
FROM stg.Layoff
),
MED AS (
        SELECT
                PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY total_laid_off) OVER () AS Med_total_laid_off,
                PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY funds_raised) OVER () AS Med_funds_raised,
                PERCENTILE_CONT(0.5) WITHIN GROUP ( ORDER BY Pct_num) OVER () AS Med_Pct
FROM CLEAN
)
SELECT
       COALESCE(UPPER(TRIM(Company)), 'Unknown') AS Company,
       COALESCE(UPPER(TRIM(Location)),'Unknown') AS Location,
       COALESCE(UPPER(TRIM(industry)), 'Unknown') AS industry,
       COALESCE(UPPER(TRIM(Stage)), 'Unknown') AS Stage,
       COALESCE(UPPER(TRIM(country)), 'Unknown') AS Ccountry,
       YEAR(date_added) AS YEAR_date_added,
       MONTH(date_added) AS MONTH_date_added,
       DAY(date_added) AS DAY_date_added,
       CASE WHEN total_laid_off IS NULL THEN 1 ELSE 0 END AS total_laid_off_Missing,
       CASE WHEN total_laid_off IS NULL THEN 1 ELSE 0 END AS percentage_laid_off_Missing ,
       CASE WHEN funds_raised IS NULL THEN 1 ELSE 0 END AS funds_raised_Missing,
       COALESCE( total_laid_off, (SELECT TOP 1 Med_total_laid_off FROM MED)) AS imp_total_laid_off,
       COALESCE( total_laid_off, (SELECT TOP 1 Med_Pct FROM MED)) AS imp_percentage_laid_off,
```

```sql
        COALESCE( funds_raised, (SELECT TOP 1 Med_funds_raised FROM MED)) AS imp_funds_raised
FROM CLEAN
WHERE Row_nm = 1
```

FULL CLEAN TABLE VIEW

```sql
SELECT * FROM VW_Layoff
```

	Company	Location	industry	Stage	Ccountry	YEAR_date_added	MONTH_date_added	DAY_date_added	total_laid_off_Missing	percentage_laid_off_Missing	funds_raised_Missing	imp_total_lai
1	#PAID	TORONTO,NON-U.S.	MARKETING	SERIES B	CANADA	2023	1	28	0	0	0	19
2	&OPEN	DUBLIN,NON-U.S.	MARKETING	SERIES A	IRELAND	2022	12	1	0	0	0	9
3	100 THIEVES	LOS ANGELES	CONSUMER	SERIES C	UNITED STATES	2022	7	18	0	0	0	12
4	100 THIEVES	LOS ANGELES	RETAIL	SERIES C	UNITED STATES	2023	1	12	1	1	0	87
5	10X GENOMICS	SF BAY AREA	HEALTHCARE	POST-IPO	UNITED STATES	2022	8	4	0	0	0	100
6	123MILHAS	BELO HORIZONTE,NON-U.S.	TRAVEL	UNKNOWN	BRAZIL	2023	10	6	1	1	1	87
7	1K KIRANA	GURUGRAM,NON-U.S.	RETAIL	SERIES B	INDIA	2023	4	4	0	0	1	600
8	1STDIBS	NEW YORK CITY	RETAIL	SERIES D	UNITED STATES	2020	4	8	0	0	0	70
9	23ANDME	SF BAY AREA	HEALTHCARE	POST-IPO	UNITED STATES	2023	8	8	0	0	0	71
10	23ANDME	SF BAY AREA	HEALTHCARE	POST-IPO	UNITED STATES	2023	6	9	0	0	0	75
11	23ANDME	SF BAY AREA	HEALTHCARE	POST-IPO	UNITED STATES	2024	11	12	0	0	0	200
12	2TM	SAO PAULO,NON-U.S.	CRYPTO	UNKNOWN	BRAZIL	2022	6	2	0	0	0	90
13	2TM	SAO PAULO,NON-U.S.	CRYPTO	UNKNOWN	BRAZIL	2022	9	2	0	0	0	100
14	2U	WASHINGTON D.C.	EDUCATION	POST-IPO	UNITED STATES	2023	9	29	1	1	0	87
15	2U	WASHINGTON D.C.	EDUCATION	POST-IPO	UNITED STATES	2024	12	7	1	1	0	87
16	2U	WASHINGTON D.C.	EDUCATION	POST-IPO	UNITED STATES	2024	1	23	1	1	0	87
17	2U	WASHINGTON D.C.	EDUCATION	POST-IPO	UNITED STATES	2025	4	1	1	1	0	87
18	2U	WASHINGTON D.C.	EDUCATION	POST-IPO	UNITED STATES	2022	7	30	1	1	0	87
19	54GENE	WASHINGTON D.C.	HEALTHCARE	SERIES B	UNITED STATES	2022	8	30	0	0	0	95
20	5B SOLAR	SYDNEY,NON-U.S.	ENERGY	SERIES A	AUSTRALIA	2022	6	3	1	1	0	87
21	6SENSE	SF BAY AREA	SALES	SERIES E	UNITED STATES	2022	10	14	0	0	0	150
22	7SHIFTS	SASKATOON,NON-U.S.	FOOD	SERIES C	CANADA	2023	9	21	0	0	0	30
23	7SHIFTS	SASKATOON,NON-U.S.	FOOD	SERIES C	CANADA	2024	1	18	0	0	0	68
24	80 ACRES FA...	CINCINNATI	FOOD	UNKNOWN	UNITED STATES	2023	1	19	1	1	0	87
25	988	TEL AVIV,NON-U.S.	CONSUMER	POST-IPO	ISRAEL	2024	1	12	1	1	1	87

 After Results
•   The cleaned dataset now has unified formats, no critical nulls, and clear structure for modeling.

Conclusion
The Layoffs dataset is now fully cleaned and ready for predictive model development.
All key variables have been standardized, missing values treated, and new flags added for transparency.