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Exploratory Data Analysis

Explore each column to identify patterns in the data and answer questions regarding:

- When did these layoffs occur?

- What industry has had the most layoffs?

- Dates of layoffs (is there a particular pattern for the timing of layoffs?)

- What industry is least affected by layoffs?

- How does this vary by country?

- Does funding influence if layoffs increase or decrease?

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-- Pull up data for Review

SELECT \*

FROM layoffs\_staging2;

-- Date Range

SELECT MIN(`date`), MAX(`date`)

FROM layoffs\_staging2;

-- Date ranges from 2020 - 2023, COVID could have been an important factor to widespread layoffs

-- Max total layoffs

-- 12,000 total with 100% laid off (the company went under)

SELECT MAX(total\_laid\_off), MAX(percentage\_laid\_off)

FROM layoffs\_staging2;

-- Explore companies

SELECT \*

FROM layoffs\_staging2

WHERE percentage\_laid\_off = 1

ORDER BY total\_laid\_off DESC;

SELECT company, SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY company

ORDER BY 2 DESC;

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Major global companies have laid off over 10,000 employees

Amazon 18150

Google 12000

Meta 11000

Salesforce 10090

Microsoft 10000

Philips 10000

lowest laid off are 35 employees

\*/

SELECT industry, SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY industry

ORDER BY 2 DESC;

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The top 5 industries affected by layoffs are

Consumer - 45182

Retail - 43613

Other - 36289

Transportation - 33748

Finance - 28344

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-- By country

-- America has the highest total more than all other countries combined in the dataset

SELECT country, SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY country

ORDER BY 2 DESC;

-- Layoffs by date for United States

SELECT YEAR(`date`),country, SUM(total\_laid\_off)

FROM layoffs\_staging2

WHERE country = 'United States'

GROUP BY YEAR(`date`)

ORDER BY 1 DESC;

-- Date and total for all countries

SELECT YEAR(`date`), SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY YEAR(`date`)

ORDER BY 2 DESC;

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2022 had the highest number of layoffs, 2021 was the lowest.

However, for 2023 we only have 3 month worth of data but the total is 125,677 total layoffs already

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SELECT YEAR(`date`), SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY YEAR(`date`)

ORDER BY 2 DESC;

-- Stage of companies with the most layoffs

SELECT stage, SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY stage

ORDER BY 2 DESC;

-- Post IPO had the most with 204,132

-- Subsidiary & SEED had the least

-- Total Layoffs with each month throughout the years (ignore NULLS)

SELECT substring(`date`,1,7) AS `Month`, sum(total\_laid\_off)

FROM layoffs\_staging2

WHERE substring(`date`,1,7) IS NOT NULL

GROUP BY `Month`

ORDER BY 1 ASC;

-- There are a total of 383,159 (383,659 layoffs including nulls). How is this spread across by months and years?

SELECT sum(total\_laid\_off)

FROM layoffs\_staging2;

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Create a rolling total of layoffs to show each month and year to see how it adds to the total amount

\*/

WITH Rolling\_Total AS

(

SELECT substring(`date`,1,7) AS `Month`, sum(total\_laid\_off) As total\_layoffs

FROM layoffs\_staging2

WHERE substring(`date`,1,7) IS NOT NULL

GROUP BY `Month`

ORDER BY 1 ASC

)

SELECT `Month`, total\_layoffs

, sum(total\_layoffs) OVER (ORDER BY `Month`) As rolling\_total

FROM Rolling\_Total;

-- The Year 2022 had the worst layoffs compared to the from 96821 to 257482 rolling total

-- Can include a percentage column to better understand the impact of layoffs for a certain month and year

WITH Rolling\_Total AS

(

SELECT

SUBSTRING(`date`, 1, 7) AS `Month`,

SUM(total\_laid\_off) AS total\_layoffs

FROM layoffs\_staging2

WHERE SUBSTRING(`date`, 1, 7) IS NOT NULL

GROUP BY `Month`

ORDER BY 1 ASC

)

SELECT

`Month`,

total\_layoffs,

ROUND((total\_layoffs / SUM(total\_layoffs) OVER ()) \* 100, 2) AS percentage\_of\_total,

SUM(total\_layoffs) OVER (ORDER BY `Month`) AS rolling\_total

FROM Rolling\_Total;

-- 2023-01 had the highest percentage of layoffs around the world

-- Which country had the highest layoffs

SELECT country, SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY country

ORDER BY 2 DESC;

-- America had the majority of layoffs ( 256559 out of 383,659 = 67% total )

-- Which company laid off the most by year

SELECT company, YEAR (`date`), SUM(total\_laid\_off)

FROM layoffs\_staging2

GROUP BY company, YEAR(`date`)

ORDER BY 3 DESC;

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So far most layoffs come from America within the large companies Amazon, Google, Meta, and Microsoft.

2023 had the highest layoff percentage despite it only having 3 months recorded in that year.

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-- Which industry had the most layoffs by year and country

SELECT industry, YEAR (`date`), SUM(total\_laid\_off), country

FROM layoffs\_staging2

GROUP BY industry, YEAR (`date`), country

ORDER BY 3 DESC;