Tech Layoffs EDA

By Egor Sysoev

Data Overview

- The dataset contains information about layoffs in tech companies between 2020 and 2024
- 1418 entries

Data Columns

- "#" - ID (unique. number)
- "Company" - name of the company
- "Location_HQ" - Location of headquarter of the company
- "Country" - Country, where the headquarter is located
- "Continent" - Continent, where the headquarter is located
- "Laid_Off" - number of people, who where laid of
- "Date_layoffs" - date of layoffs
- "Percentage" - Percentage of layoffs compared to total company size
- "Company_Size_before_Layoffs" -
- "Company_Size_after_layoffs"
- "Industry" - Industry the company is in
- "Stage" - Stage of company (private, public etc)
- "Money_Raised_in_$_mil"
- "Year" - Year of layoffs
- "lat" - Latitude of headquarter
- "lng" - longitude of headquarter

Initial Hypotheses

- Most tech layoffs likely occurred in big tech companies from the US. Perhaps less in other countries?

- Most layoffs happened in late 2022?

- All companies laid off a similar percentage?

- Companies that raised more money laid off less?

Where did most layoffs occur?
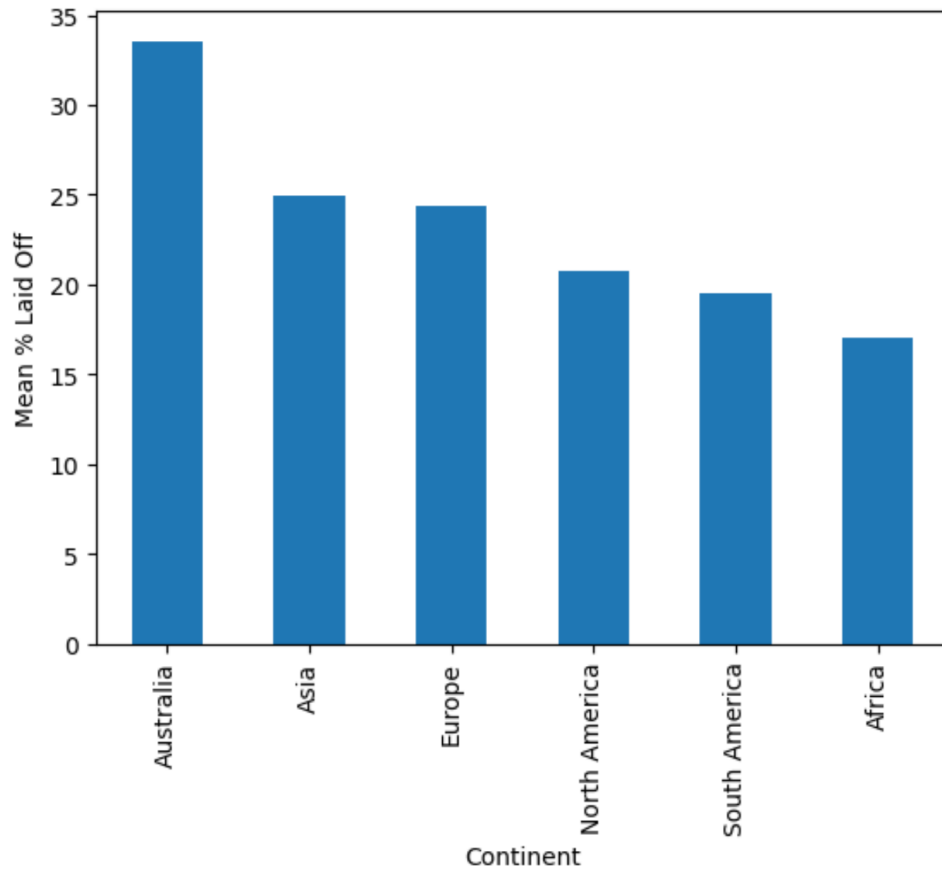
- The vast majority of tech companies in the dataset are from the US, which is why most layoffs are, naturally, from there

- But when we look at the percentages laid off in specific companies, we see that the median layoff percentage is highest in Asia and Australia, and not North America.

When did most layoffs occur?
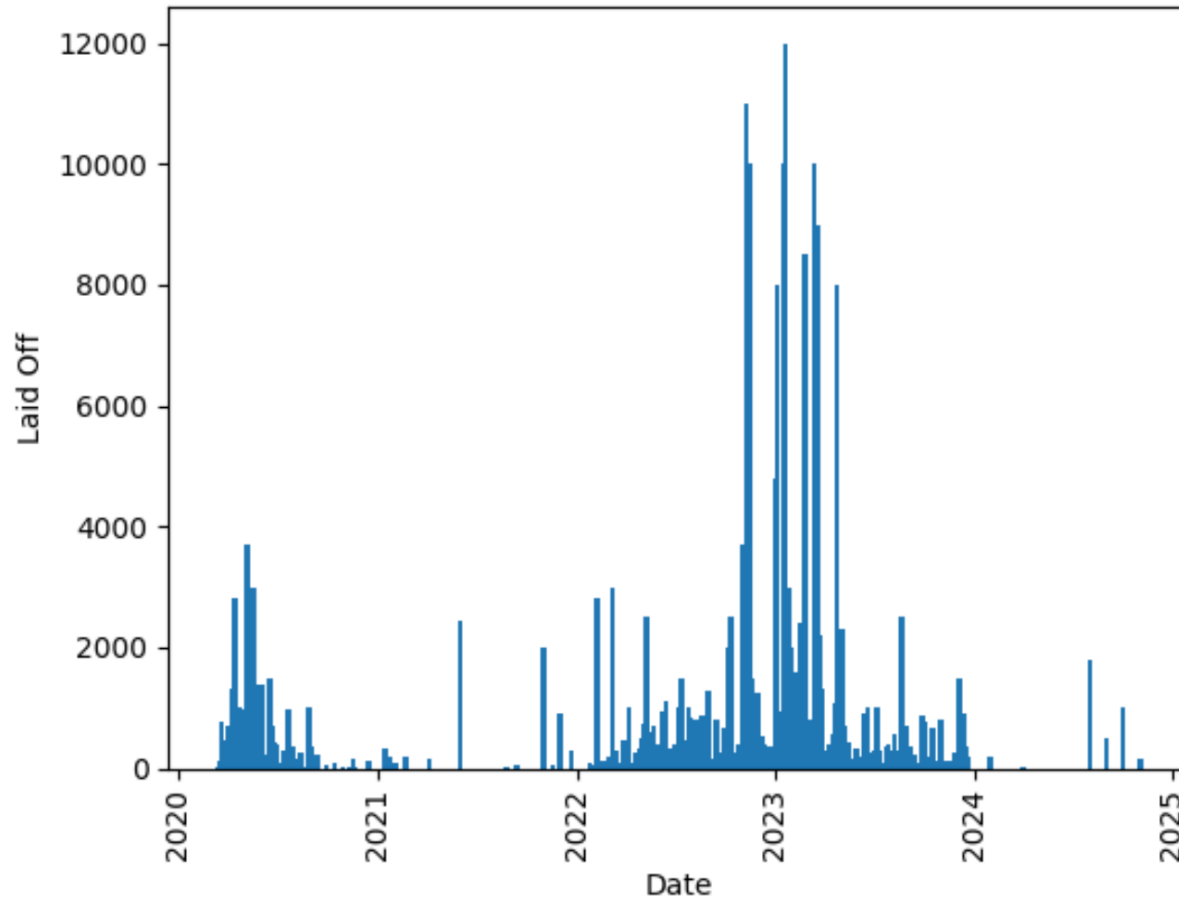
The major layoffs started in late 2022, and continues through early 2023. Interestingly we can see that there was a little pause before New Year (likely for bureaucratic reasons).

# Did all companies lay off a similar percentage?
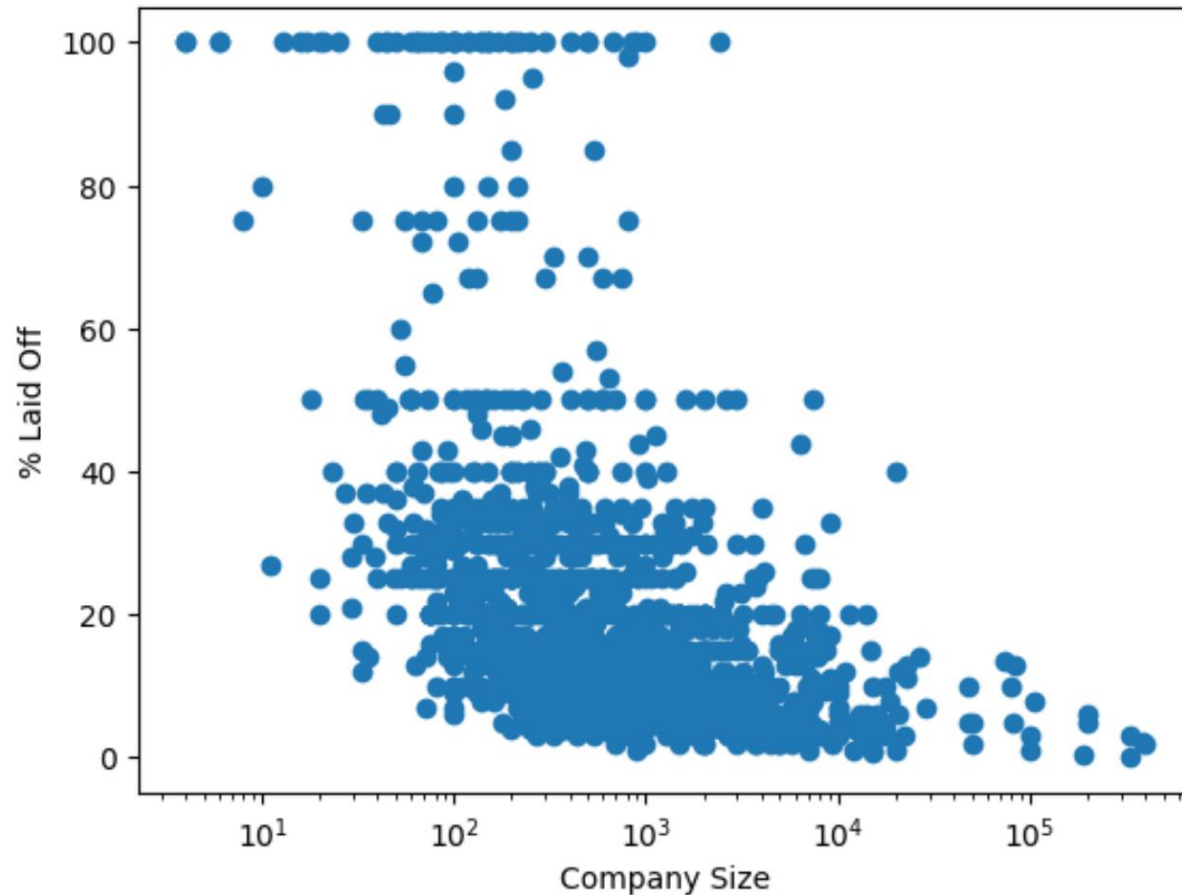
Generally there is no correlation between the size of the company and the percentage it lays off. We can wee that the few biggest companies do not lay off > 20%, while for the rest there is no significant correlation with their size.

Did companies who raised more money lay off fewer people?
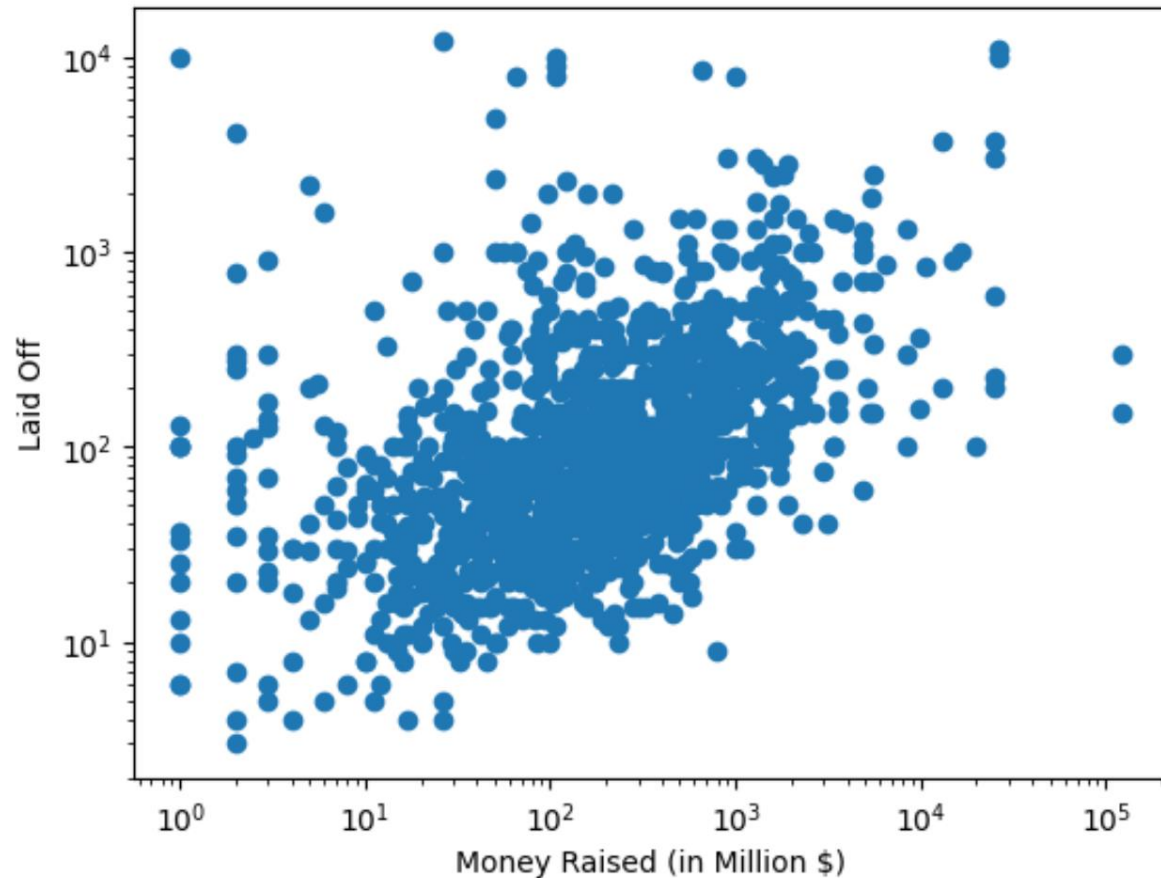
It seems that companies that made more money laid off more workers. This seems counterintuitive. Probably due to a strong correlation with company size.

Did companies who raised more money lay off fewer people?
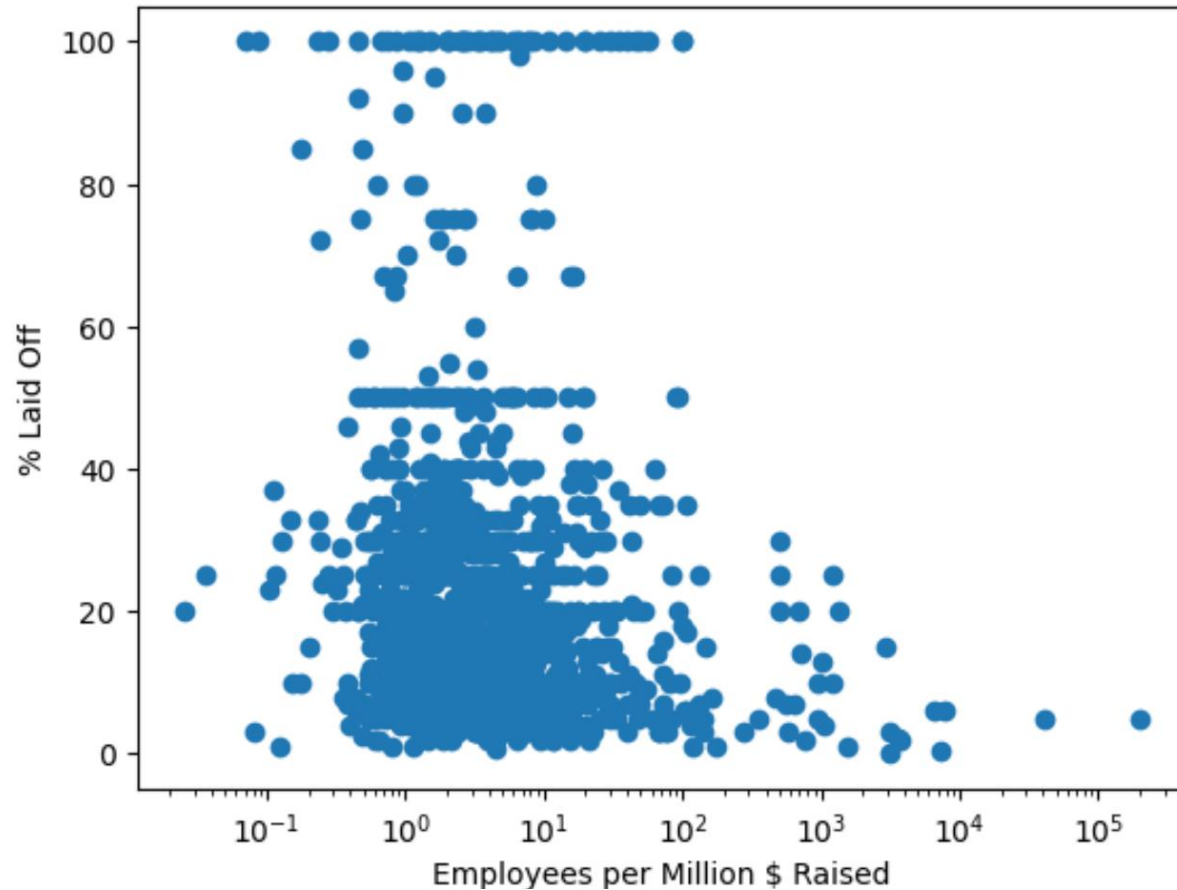
So I tried to adjust for size by seeing if "overcrowded" companies (employees/money made) laid off a larger percentage of workers.

Surprisingly, there is a reversed trend even here! While it is not significant, there is clearly a tendency to lay off a higher percentage when a company is LESS crowded.

Nontrivial conclusions

- The companies hit hardest were form Australia and Asia, not the US
- Companies that make a lot of money per employee did not lay off significantly more workers than other companies