The 2023 Tech Layoff Surge: Timing, Industry Impact & Capital Analysis

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I Project Overview

Objective

To analyze global tech layoffs (2020–2024) to:

- Identify peak layoff periods
- Determine which industries were most impacted
- Evaluate whether funding levels protected companies from workforce reductions

Tool Used

- Tableau Public
- Dataset: Global Tech Layoffs (Kaggle-based dataset)
- File Format: CSV

II Data Preparation

Step 1: Data Import

- Loaded CSV file into Tableau Public.
- Verified field types:
    - Date → Date data type
    - Laid Off Count → Measure (Integer)
    - Funds Raised → Measure (Numeric)
    - Industry → Dimension
    - Stage → Dimension

Step 2: Data Cleaning

- Filtered out null layoff records using:
    - “Has Layoff Count?” field

- Ensured Date field used full date format (not string).
- Checked for missing funding values.

Step 3: Field Adjustments

- Converted Date to continuous Month for time-series analysis.
- Aggregated Laid Off Count using SUM().
- Used YEAR(Date) filter for industry-specific 2023 analysis.

III Sheet 1 – Layoffs Over Time (Time-Series Analysis)

Purpose

To identify trends and peak layoff periods.

Steps to Create

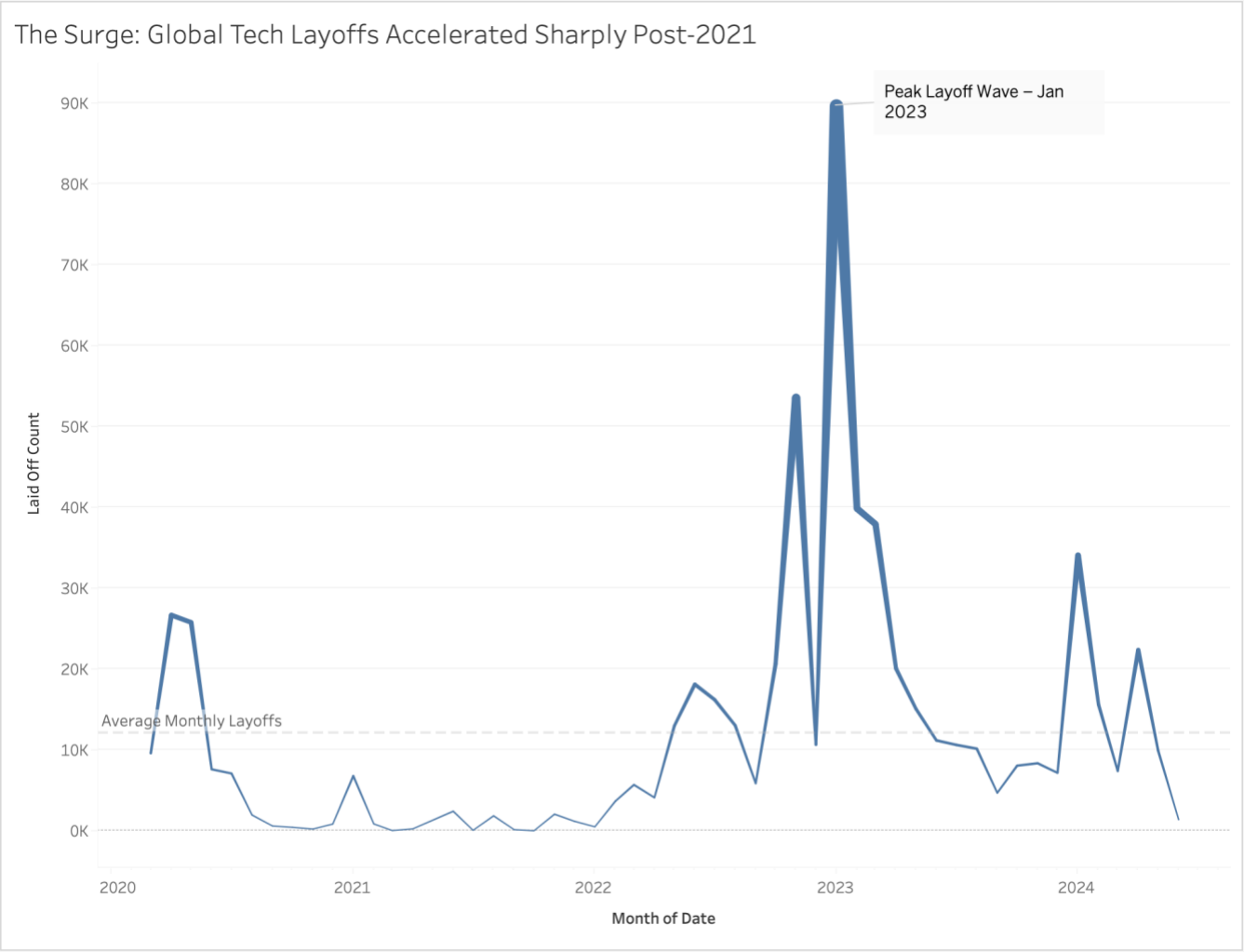
1. Drag **Date** to Columns.
2. Change to **Continuous Month**.
3. Drag **Laid Off Count** to Rows.
4. Ensure aggregation is SUM().
5. Change Marks to Line.

Enhancements

- Added average reference line:
    - Analytics → Drag “Average Line” to table.
- Added annotation on January 2023 peak:
    - Right-click data point → Annotate → Mark.
- Reduced gridlines for clarity.
- Adjusted title for narrative clarity.

Insight

Layoffs accelerated sharply in late 2022, peaking in January 2023.



IV Sheet 2 – Industry Impact (2023 Focus)

Purpose

To determine which industries drove the surge.

Steps to Create

1. Drag **Industry** to Rows.
2. Drag **SUM(Laid Off Count)** to Columns.
3. Sort descending.
4. Add filter:
    - YEAR(Date) = 2023.

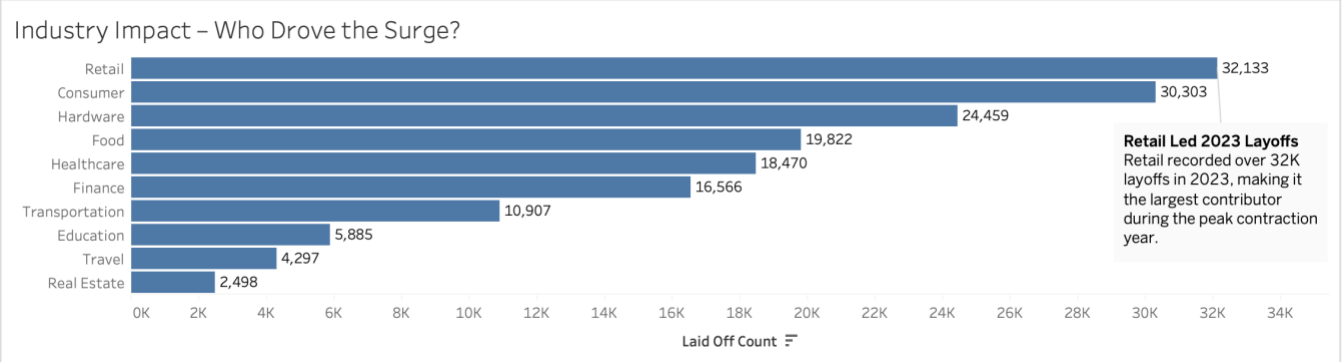
5. Show labels on bars.

Enhancements

- Highlighted top industry (Retail).
- Added insight annotation box.
- Removed unnecessary gridlines.
- Adjusted formatting for clean bar spacing.

Insight

Retail led total workforce reductions in 2023, followed by Consumer and Hardware sectors.



V Sheet 3 – Funding vs Layoffs (Correlation Analysis)

Purpose

To evaluate whether higher funding levels protected companies from layoffs.

Steps to Create

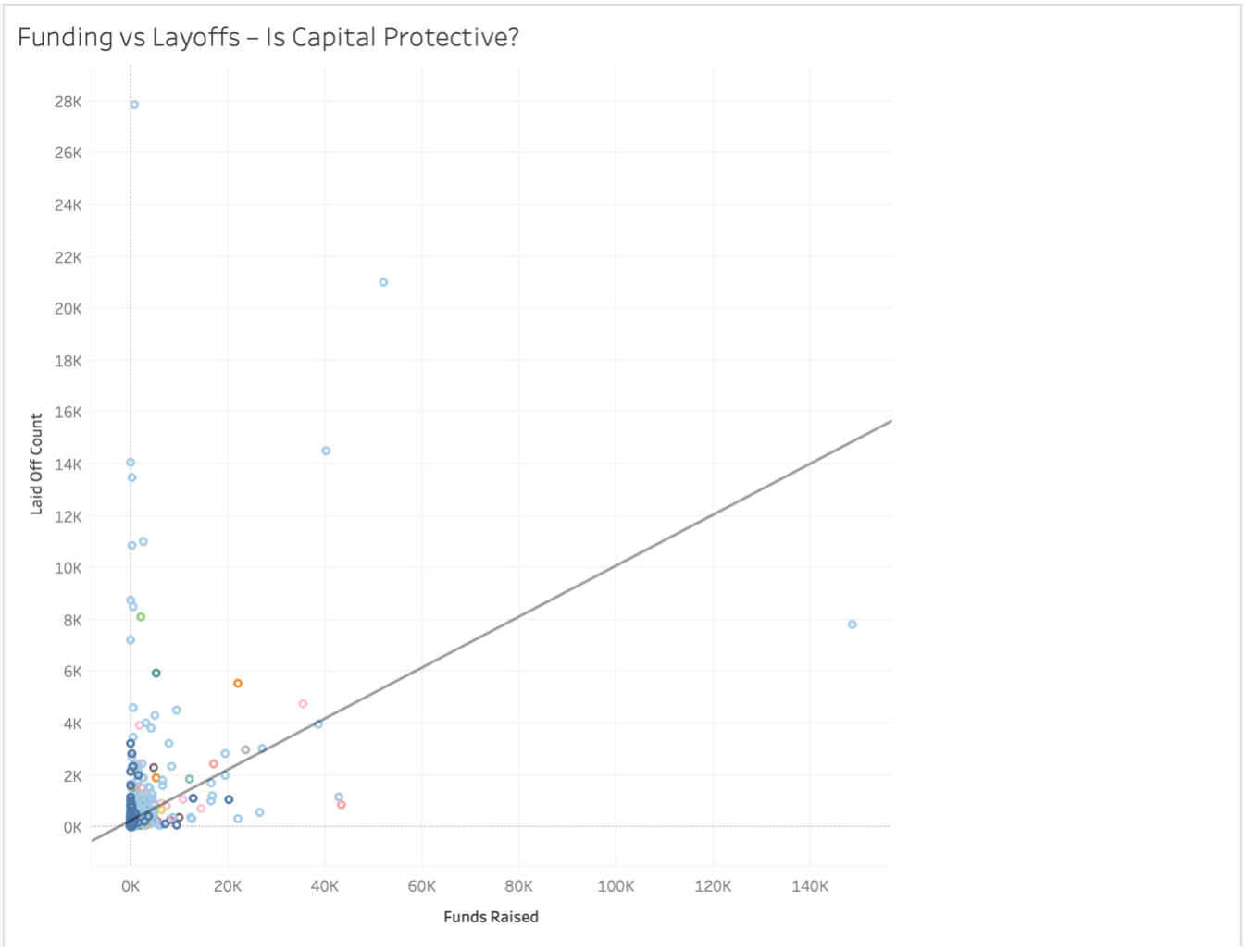
1. Drag **Funds Raised** to Columns.
2. Drag **SUM(Laid Off Count)** to Rows.
3. Set Marks to Circle.
4. Drag:
    - Company → Detail
    - Stage → Color
5. Add linear trend line:
    - Analytics → Trend Line → Linear.

Adjustments

- Removed log scale.
- Removed per-color trend lines.
- Used single linear regression.
- Reduced trend line thickness.

Insight

Funding showed only a weak positive correlation with layoff magnitude, suggesting capital did not meaningfully shield firms during the downturn.



VI Dashboard Design

Layout Structure

Top Section:

- Main Title
- Subtitle

Middle Section:

- Left: Time-Series Chart
- Right: Industry Breakdown

Bottom Section:

- Funding vs Layoffs Scatter Plot

Right Panel:

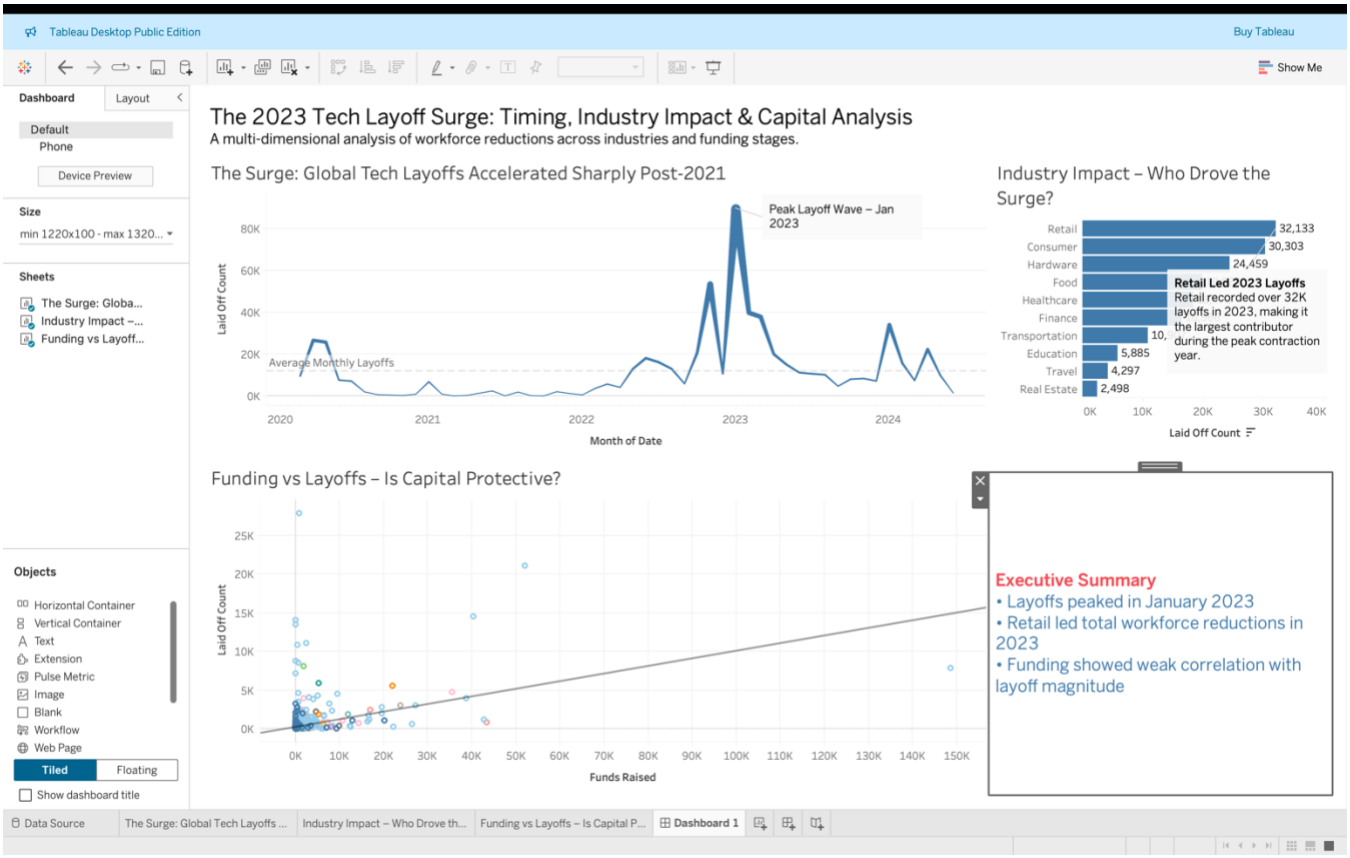
- Executive Summary

Interactivity

- Enabled “Use as Filter” for time-series chart.
- Enabled cross-filtering between sheets.
- Cleared default selections before publishing.

Formatting Improvements

- Removed unnecessary legends.
- Ensured consistent font sizes.
- Reduced visual clutter.
- Increased whitespace for readability.



VII Key Findings

1. January 2023 marked the peak of global tech layoffs.
2. Retail was the largest contributor to 2023 workforce reductions.
3. Funding levels did not strongly predict layoff magnitude.
4. Post-peak levels remained elevated compared to 2020–2021 baseline.

VIII Limitations

- Dataset dependent on publicly reported layoffs.
- Funding amounts self-reported or sourced from news.
- Does not include private unreported workforce reductions.

IX Skills Demonstrated

- Time-series analysis
- Aggregation & filtering

- Dashboard design
- Data storytelling
- Correlation analysis
- Tableau dashboard interactivity

X How to Reproduce

1. Download dataset.
2. Import into Tableau.
3. Recreate three sheets using steps above.
4. Combine into dashboard layout.
5. Apply interactive filter actions.

Final Deliverables

- Interactive Tableau Public dashboard
- GitHub documentation (this file)
- Portfolio project description
- Resume-ready bullet point