

Technology Layoffs Event Study

Collaborative project - five contributors - August 2026

A collaborative study of short-window stock-market reactions to technology-sector layoff announcements, designed to separate descriptive evidence from causal claims.

-0.5% MEAN 3-DAY ABNORMAL RETURN	0.52 CLASSIFICATION AUC	10,000 PLACEBO DRAWS
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01 EXECUTIVE SUMMARY

A modest market reaction with limited explanatory power.

The revised analysis reports an average three-day abnormal return of approximately -0.5%. Observable layoff characteristics explain little cross-sectional variation; the in-sample classifier has an AUC of approximately 0.52.

02 CASE OVERVIEW

Test whether a reaction is systematic, then ask what it can explain.

The intended audience is an analyst evaluating event-window evidence without mistaking association for a causal estimate. The project asks whether technology firms experience a systematic short-window reaction and whether observable announcement characteristics explain its direction or magnitude.

03 METHODS

Triangulate the event study with statistical and placebo checks.

The project uses market-model abnormal returns over a three-day window, one-sample and subgroup tests, multivariate OLS with diagnostic and robust-inference checks, logistic regression with in-sample ROC/AUC analysis, and a 10,000-draw placebo simulation.

A reproducible sequence and a restrained conclusion.

The repository separates data preparation from the event-study notebook and includes a revised executive summary and presentation. The weak AUC and modest average reaction narrow the claim rather than supporting prediction or causality.

- Raw and transformed datasets are not redistributed.
- The model was not evaluated on a holdout sample.

RESPONSIBLE-USE BOUNDARY

Descriptive market evidence only - not a claim that layoffs caused observed returns or that the classifier predicts out of sample. Concurrent news, ticker mapping, available price histories, and uncoded announcement narratives remain important limitations.

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