Data Breaches

Bitsight, the international cybersecurity rating agency requested an interactive data storytelling about trends in data breaches. Bitsight provided me with a dataset including data breach security incidents from 2015 to 2022 in the US.

Date 04/2023 - 09/2023

Client Bitsight

Project Bitsight.com/blog/what-data-breaches-tell-us-analysis-17000-us-data-breaches

Github Github.com/sandravizz/Data-breach-analysis

Notebooks Github.com/sandravizz/Data-breach-analysis/blob/main/EDA

Data provided by Bitsight

Tools used HTML, CSS, JavaScript, d3.js, arquero.js, plot.js

Challenges

The dataset didn't include any numeric variable, hence showing frequency by categories was the only option, which limited the possible visualisation type. Another challenge was to understand which data patterns are revealing real world trends. In order to overcome this challenge, I researched the topic deeply. After discussing the results of the EDA with the Bitsight team, I decided to use an interactive barcode chart in the format of a small multiples.

Ransomeware attacks are the new epidemic

Evolution of data breach attack reports from 01|2015 to 10|2022 highly severe vs. less severe incidents by type
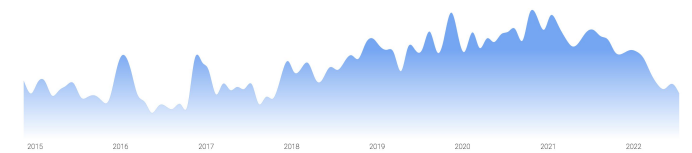In the menu category can by change by click

■ less severe attacks ■ highly severe attacks

Data breach reports show upward trend switching around in 2021
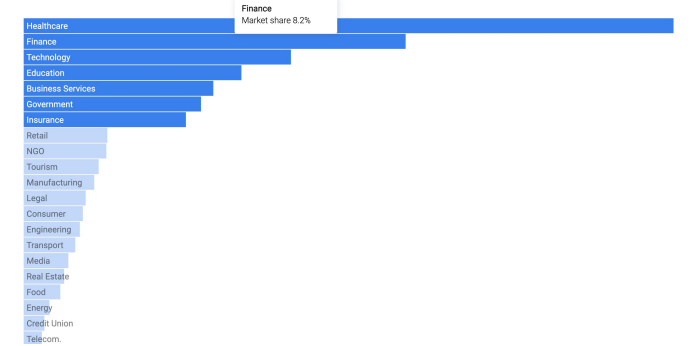Evolution of data breach attack reports from 01/2015 to 10/2022 affecting entities located in the US

Healthcare by far most threatened sector
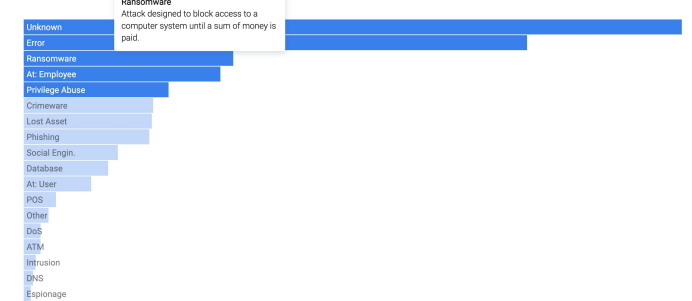Aggregated data breach attack reports by sector

Unknown and criminal business are the main types
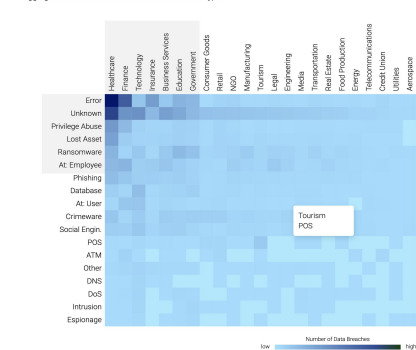Aggregated data breach attack reports by type

Finance threated by humans, Technology by their databases.
Aggregated data breach attacks across sector and type

Less but more severe attacks, what is behind this change?
Evolution of data breach attack reports from 01/2015 to 10/2022 highly severe vs. less severe incidents