

Analysis: launch a marketing campaign based on reported bike incidents in the US



June 2021 - Lfleys





Dataset is from Kaggle, but comes originally from Bikewise.org :
a site where users report incidents.

The sample spreads from January 2017 to February 2019.

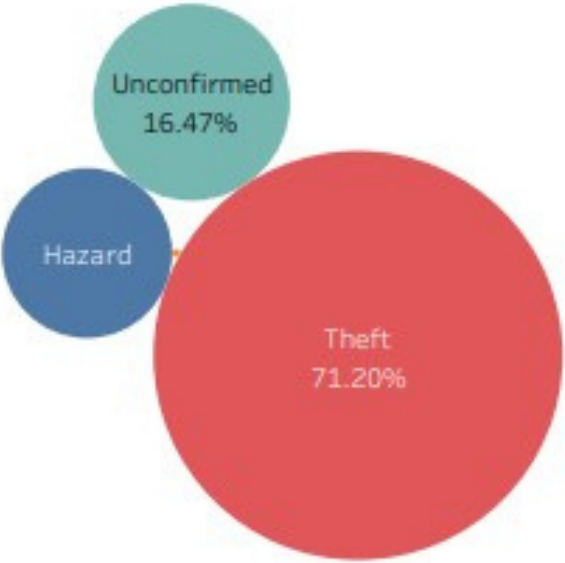
Theft represents more than 70 % of the reported incidents.

We should note though, that people are more likely to report
stolen properties than a near accident, for example.

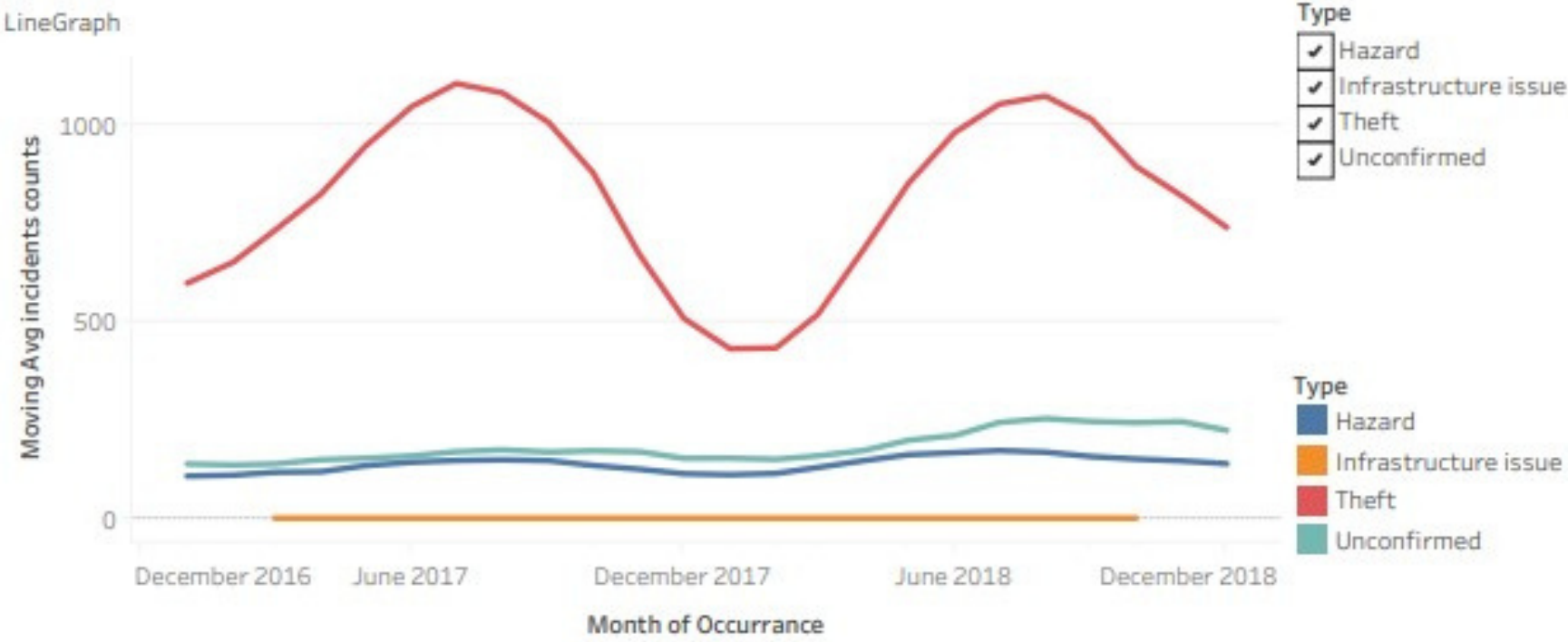


Bike Incidents in the USA

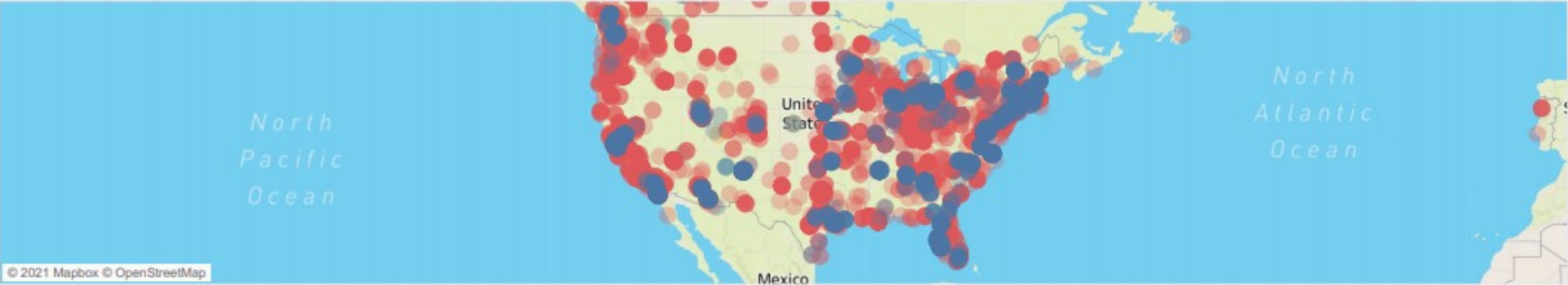
Repartitions



LineGraph



Map

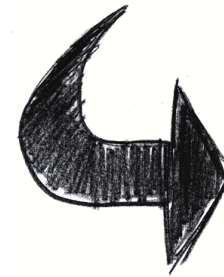
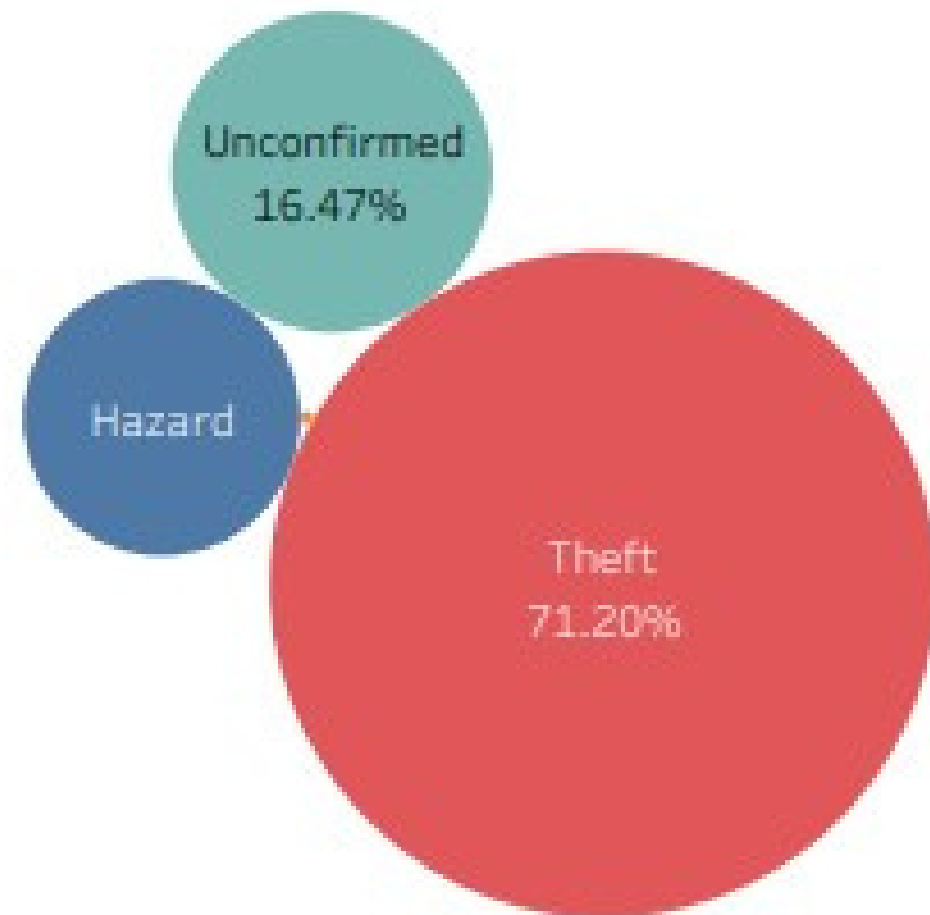


Quarters

Type	2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hazard	324	402	455	387	327	511	496	419
Infrastructure issue	1	2	1	1		2		1
Theft	1,797	2,935	3,418	2,116	985	2,588	3,387	2,223
Unconfirmed	417	466	514	512	428	594	777	673

Bike Incidents in the USA

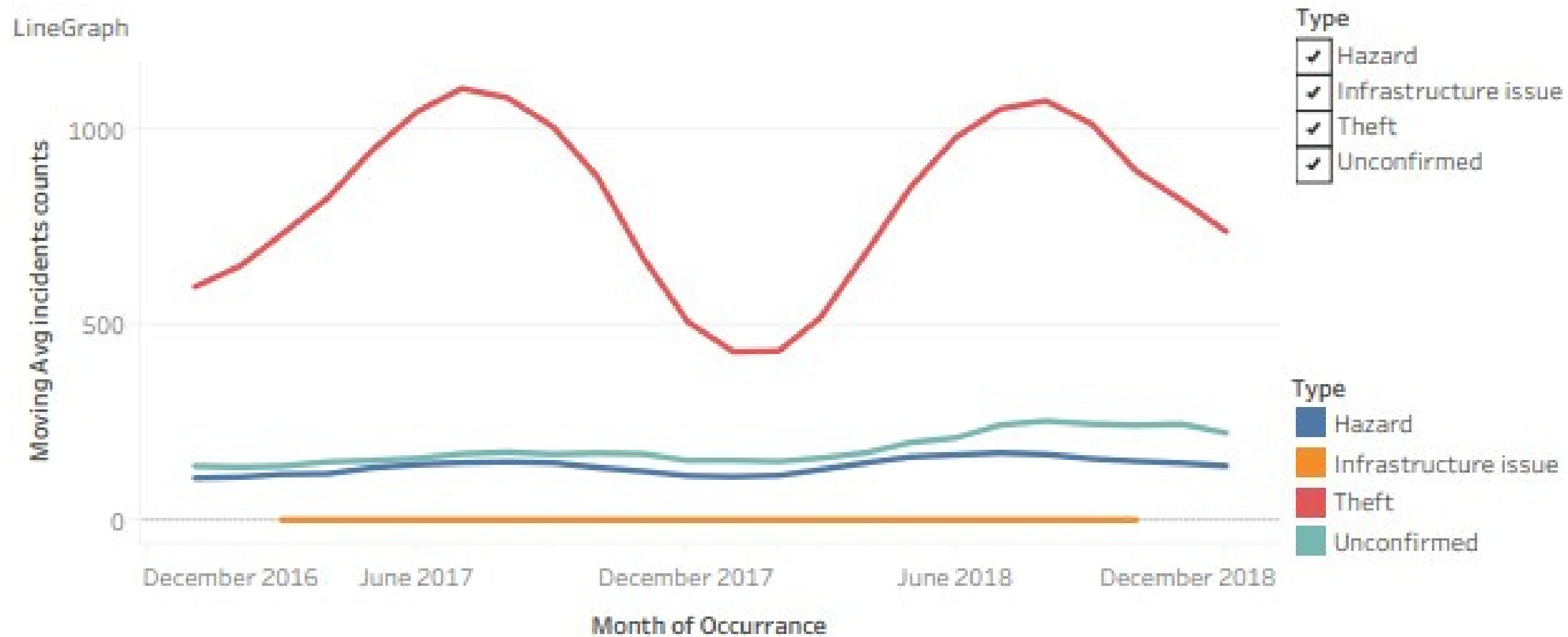
Repartitions



But, all in all, if there are a lot of stolen bikes, it means a high density of bike users in the area.

If a European bike goods seller wanted to penetrate the American market, when and where should it launched its marketing campaign?





Hazard and unconfirmed cases remain constant through time with a slight diminution in the cold months.

On the contrary, theft seems to have been affected starting from October, with a sharp low in December, January, February. It is cut by half.

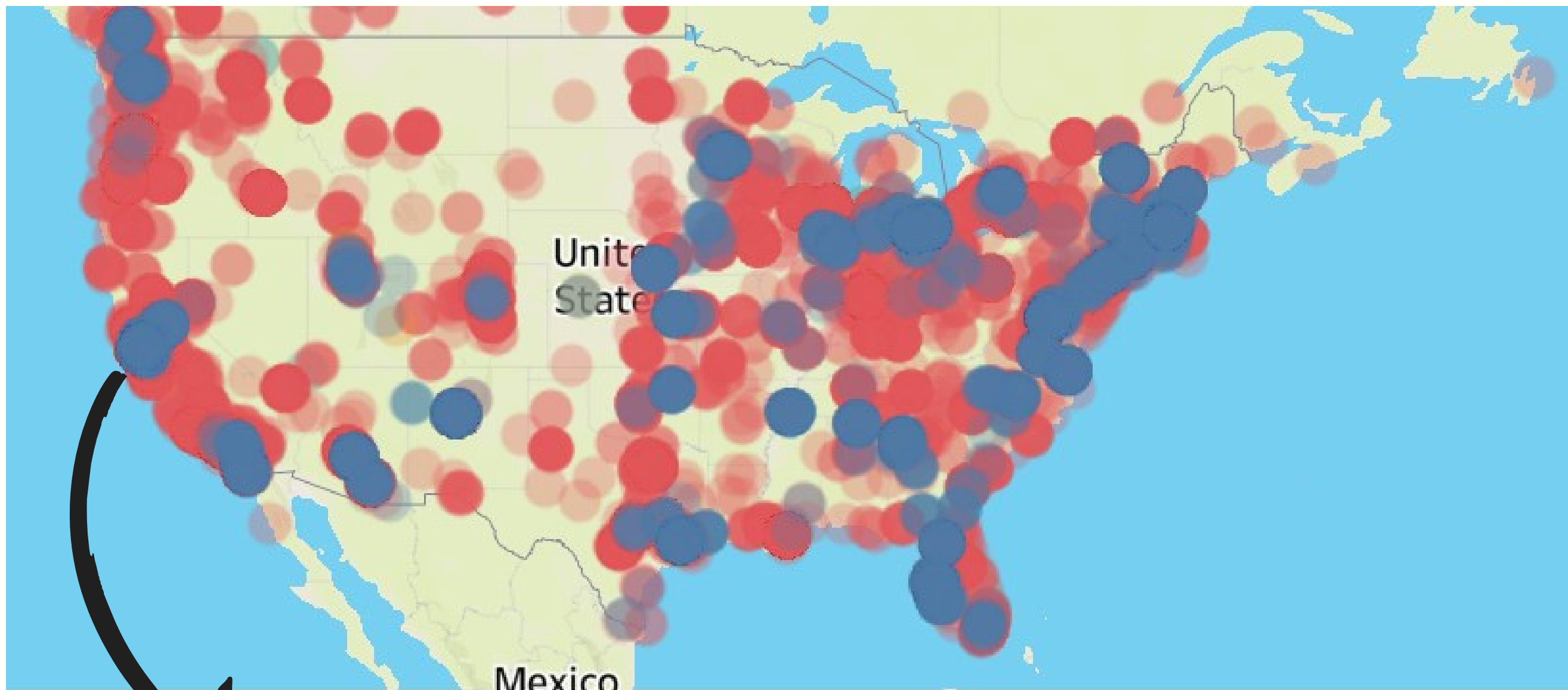




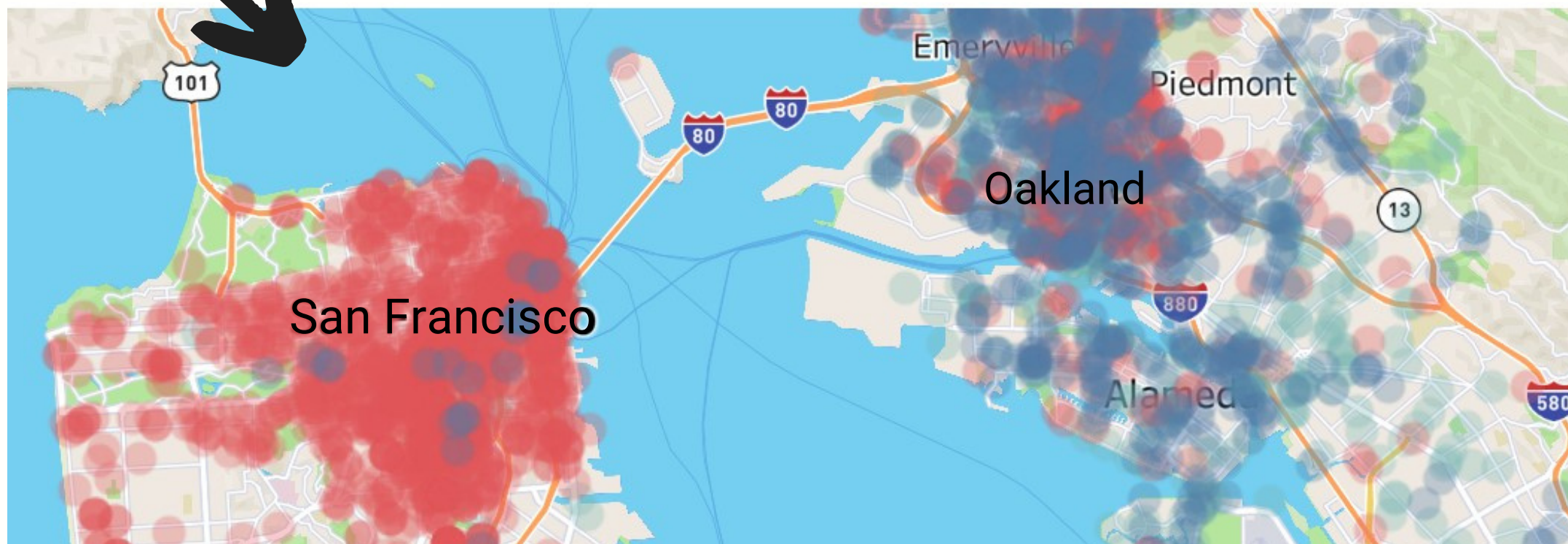
It could be a change in recording data, or that people failed to report.

It is actually weather related as winter 2017-2018 has recorded very erratic meteorological events such as tornados outbreaks, heavy blizzard even in places where these events don't usually occur.



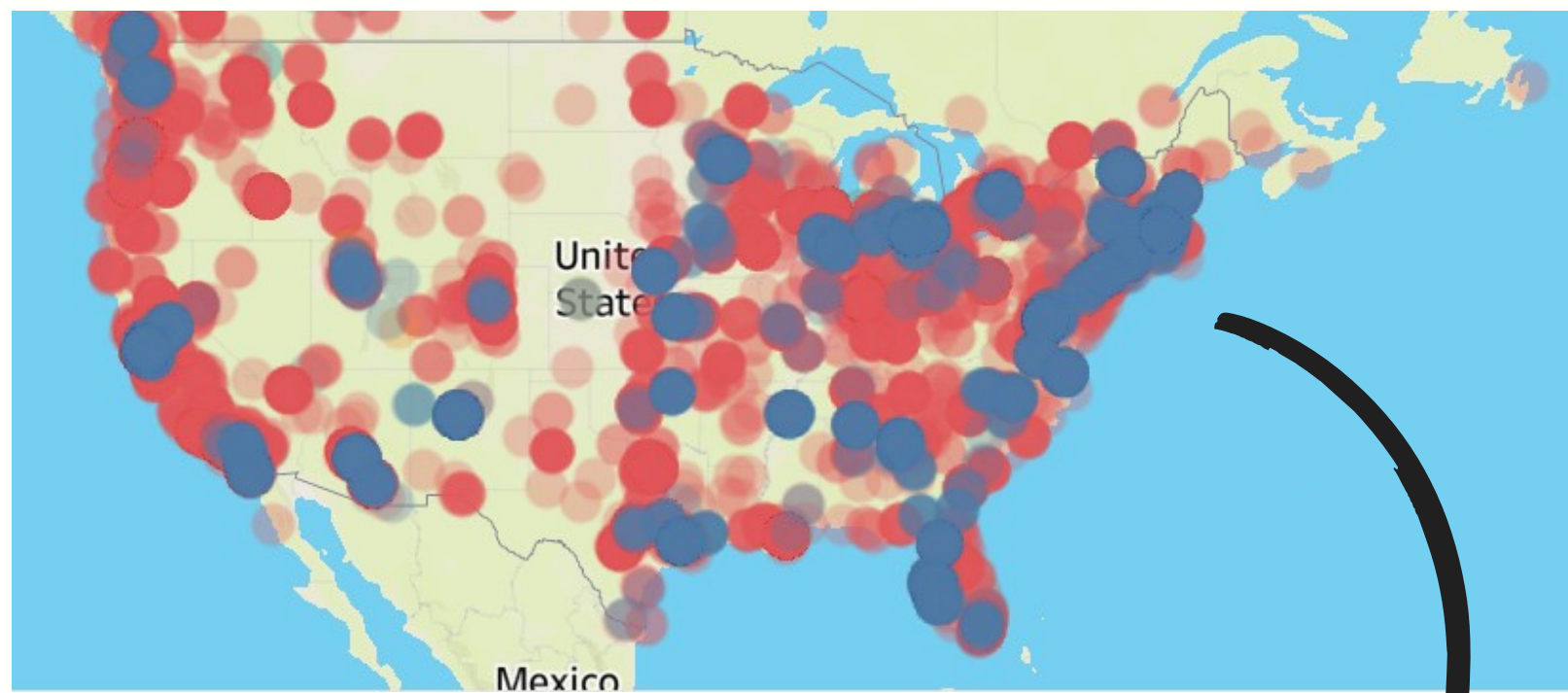


Most reports are located on the East and West Coast

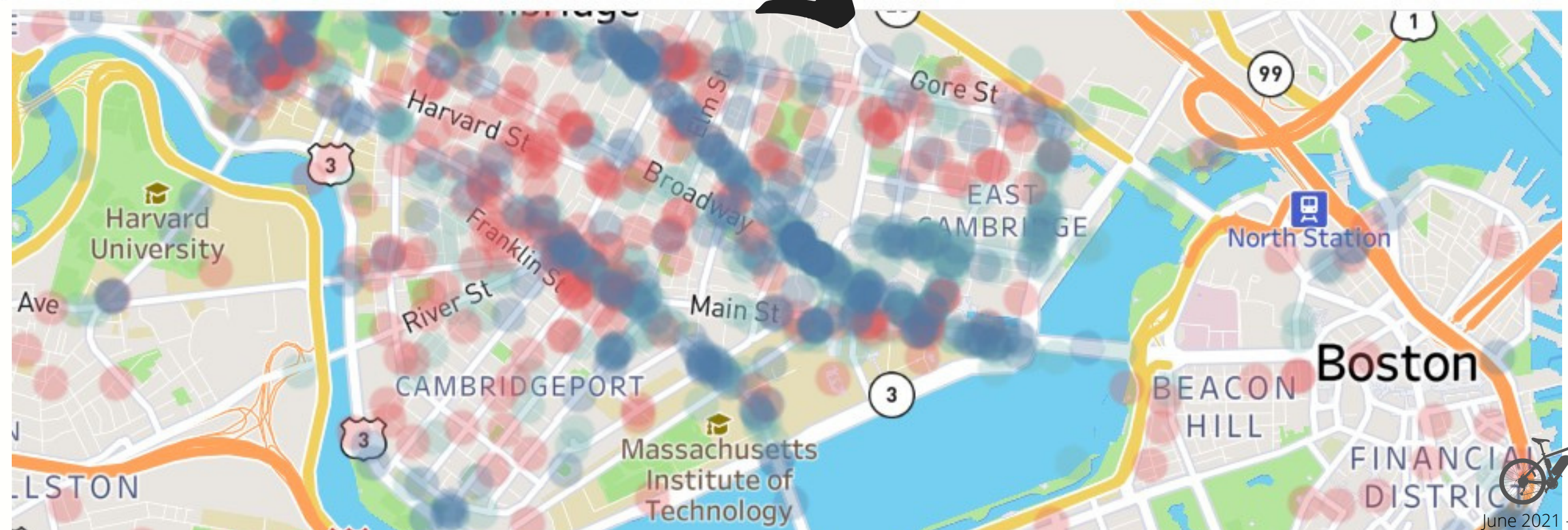
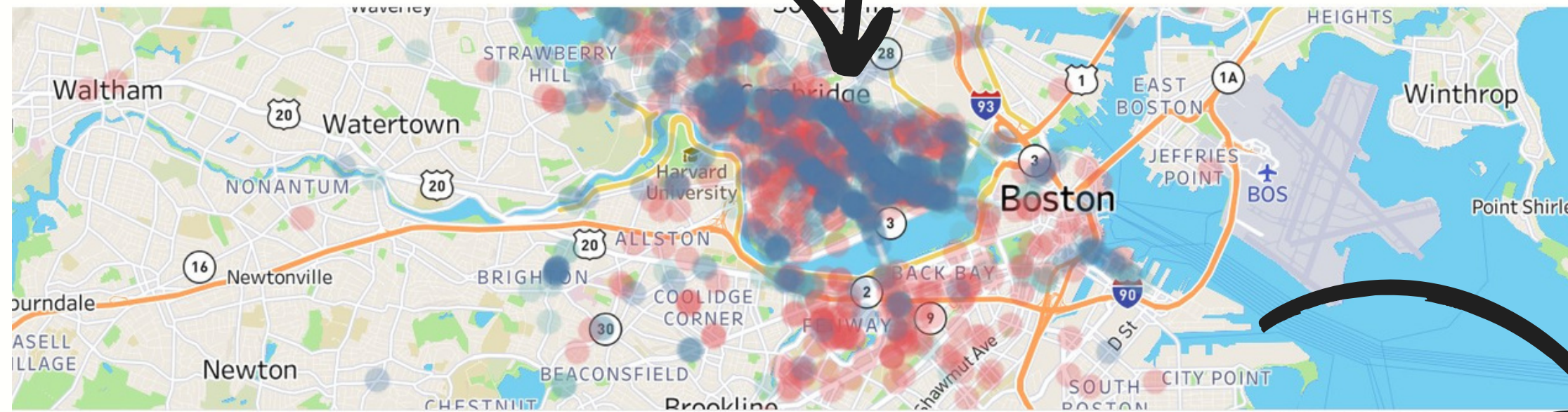


San Francisco more prone to theft
Vs Oakland (poorer area) more prone to hazards





Boston area : combination of theft and hazards near the heavy leagues campuses



Clear delimitation of hazards happening on the main roads

In the last table, we get an overview of trends that highlight the spike in bike theft in the third quarter.

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What I recommend for the advertisement campaign is to target cities on each side of the coast and to advertise at the beginning of Spring when people are buying their equipment (bikes, helmets, lights,...)
And in the middle of summer launch another sales campaign for bikes and bike chains when bikes are being stolen.





Improvements to make :

1. Get more data - to analyse the trends on a longer period
2. Combine latitudes & longitudes to get the names of the cities
3. Add a filter that shows what happened at a specific time

