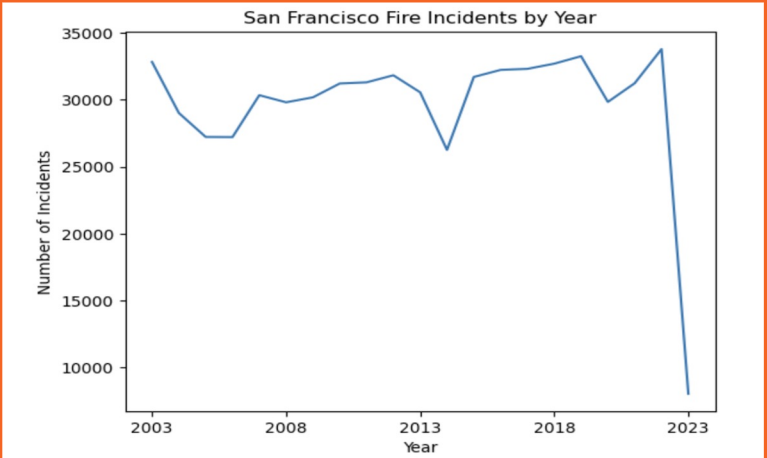
San Francisco County Fires: 2003-2023

By: Nate Payne, Anna Remler, Alex De La O, Kamran Shirazi, Kevin Lopez

Fires from 2003-2023: 622,884

```sql
--List all fires from 2003 to now
SELECT "Incident_Date", "Address", "Incident_Number"
FROM fire_data
WHERE "Incident_Date" BETWEEN '2003-01-01T00:00:000' AND '2023-03-27T00:00:00';

--How many?
SELECT COUNT("Incident_Date")
FROM fire_data;
```

	count bigint
1	622884

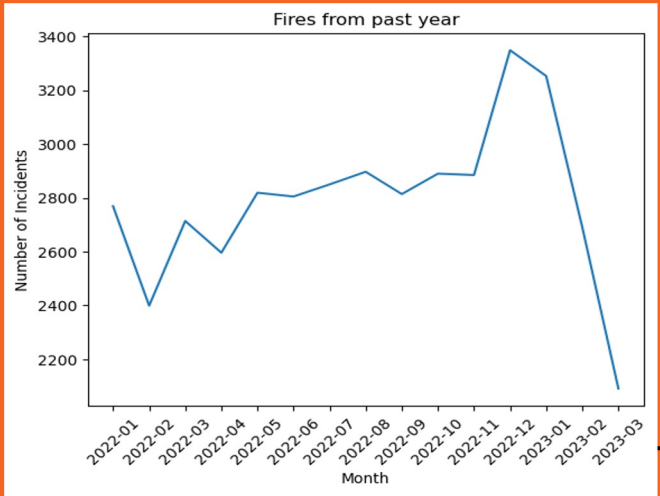


	Incident_Date text	Address text	Incident_Number bigint
1	2022-03-25T00:00:00	2 AVENUE OF THE PALMS, TI	22038552
2	2022-03-18T00:00:00	890 HAYES STREET	22035404
3	2022-03-23T00:00:00	333 POST STREET	22037867
4	2022-03-26T00:00:00	CORTLAND AVENUE	22038906
5	2022-03-29T00:00:00	655 ELLIS STREET	22040125
6	2022-03-29T00:00:00	IRVING STREET	22040159
7	2022-03-18T00:00:00	CLAYTON STREET	22035670
8	2022-03-18T00:00:00	18TH STREET	22035669
9	2022-03-18T00:00:00	1818 HYDE STREET	22035667
10	2022-03-29T00:00:00	SILLIMAN STREET	22040552
11	2022-03-29T00:00:00	1236 MARKET STREET	22040551
12	2022-03-30T00:00:00	1657 MARKET STREET	22040563
13	2022-03-25T00:00:00	1580 VALENCIA STREET	22038612

Fires from past year: 34,023

```sql
--List all fires from the last year
SELECT "Incident_Date", "Address", "Incident_Number"
FROM fire_data
WHERE "Incident_Date" BETWEEN '2022-03-31T00:00:00' AND '2023-03-31T00:00:00';

--How many?
SELECT COUNT("Incident_Date")
FROM fire_data
WHERE "Incident_Date" BETWEEN '2022-03-31T00:00:00' AND '2023-03-31T00:00:00';
```

	count bigint
1	34023

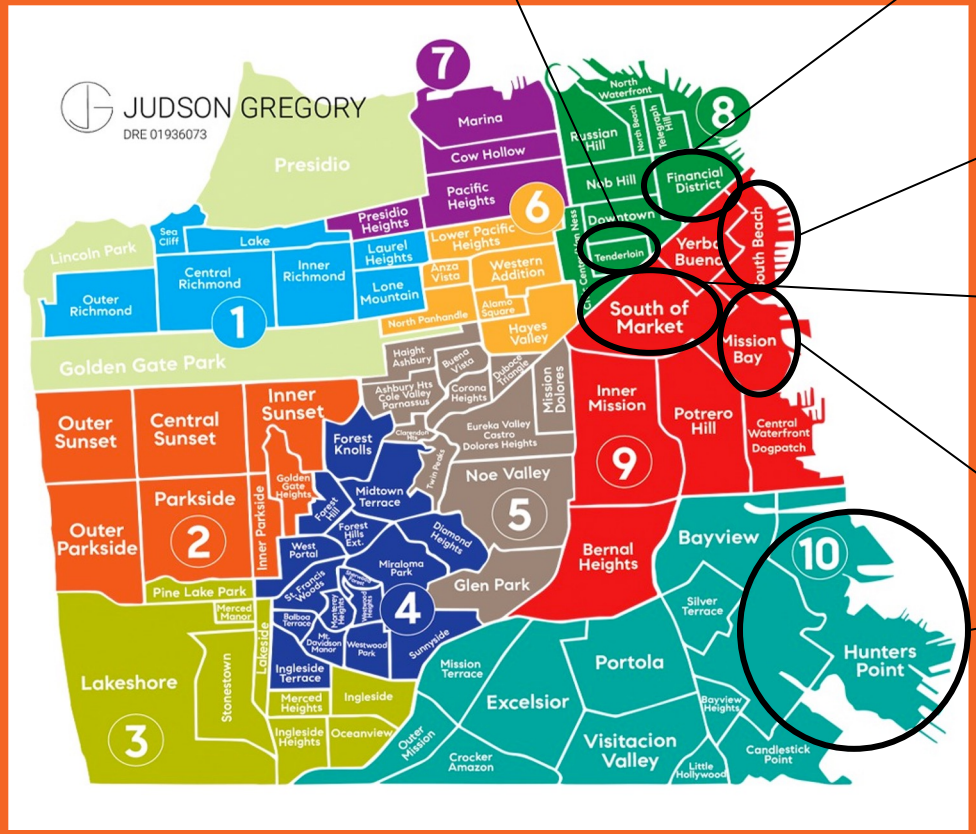


	Incident_Date text	Address text	Incident_Number bigint
1	2022-03-31T00:00:00	1388 46TH AVENUE	22040994
2	2022-03-31T00:00:00	242 BOCANA STREET	22040991
3	2022-03-31T00:00:00	1201 GOLDEN GATE AVENUE	22041078
4	2022-06-04T00:00:00	680 POINT LOBOS AV, PRAIRIE	22071232
5	2022-06-18T00:00:00	582 MARKET STREET	22077756
6	2022-06-20T00:00:00	HAIGHT STREET	22078786
7	2022-05-12T00:00:00	SACRAMENTO STREET	22060206
8	2022-05-23T00:00:00	1214 SHOTWELL STREET	22065572
9	2022-05-23T00:00:00	161 HYDE STREET	22065569
10	2022-04-10T00:00:00	DUBOCE AVENUE	22046014
11	2022-05-23T00:00:00	1029 GEARY STREET	22065568
12	2022-05-29T00:00:00	GEARY BL	22068403
13	2022-06-20T00:00:00	165 GRATTAN STREET	22078702

Pacific Ocean

San Francisco Bay

1. Tenderloin - 56,063



3. Financial District/South Beach - 49,455

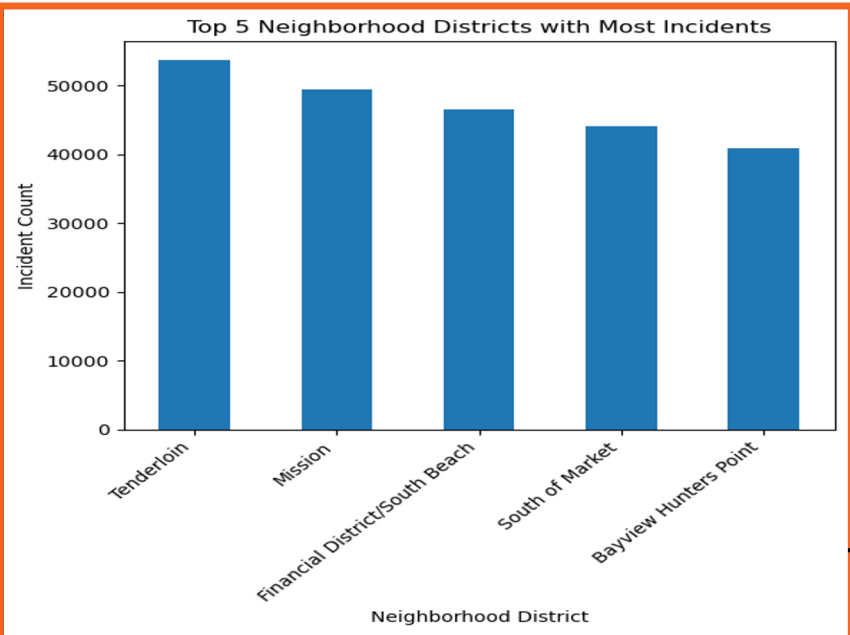
4. South of Market (SOMA) - 46,207

2. Mission - 52,422

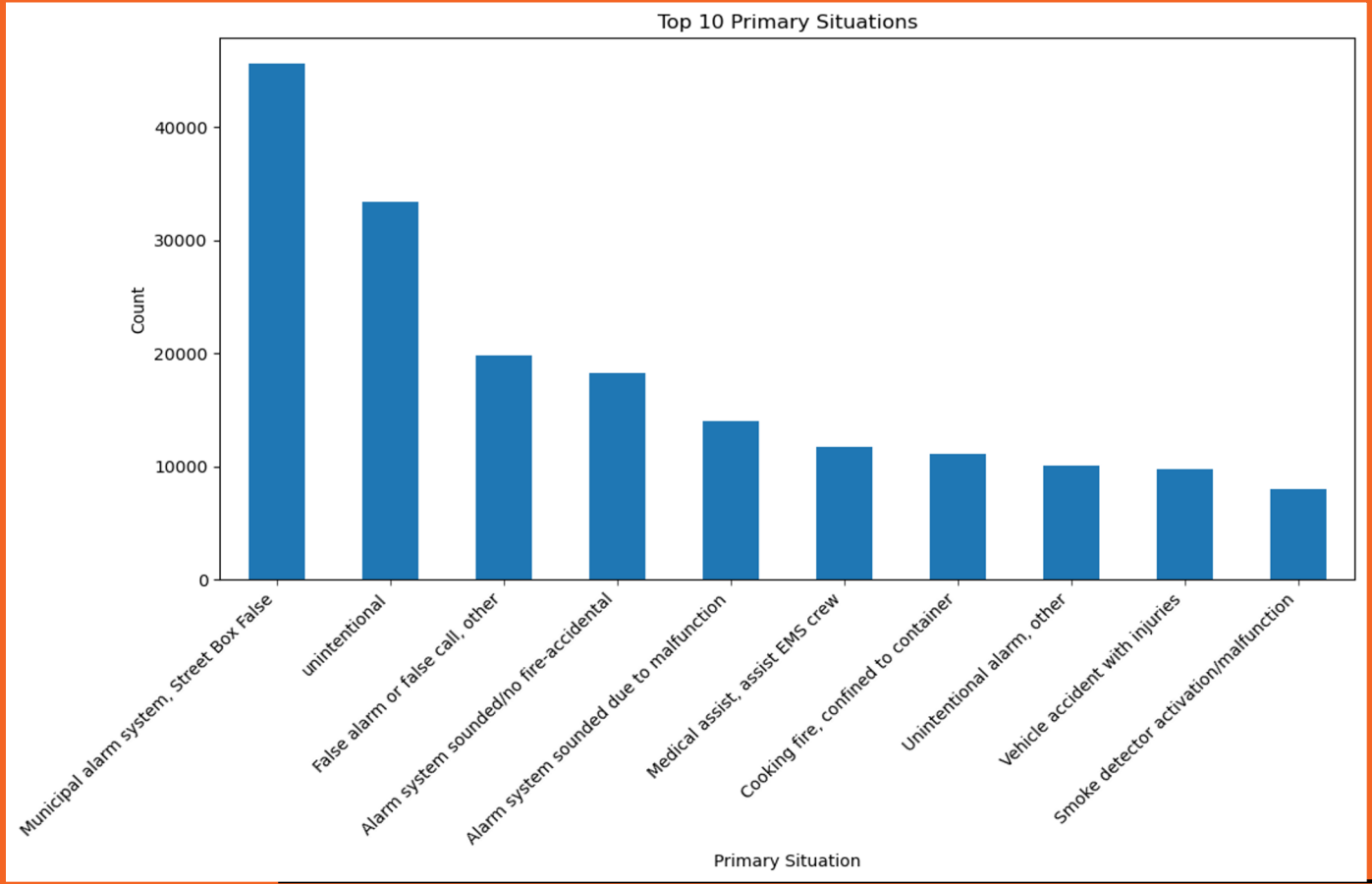
5. Bayview Hunters Point - 43,052

Fires By Neighborhood

```sql
--Which neighborhood has the most fires?
SELECT "neighborhood_district", COUNT("neighborhood_district") as COUNT
FROM fire_data
GROUP BY "neighborhood_district"
ORDER BY count DESC
LIMIT 5;
```



	neighborhood_district text	count bigint
1	Tenderloin	56063
2	Mission	52422
3	Financial District/South Beach	49455
4	South of Market	46207
5	Bayview Hunters Point	43052


Top 10 Primary Situations
Count
0
10000
20000
30000
40000
Municipal alarm system, Street Box False
unintentional
False alarm or false call, other
Alarm system sounded/no fire-accidental
Alarm system sounded due to malfunction
Medical assist, assist EMS crew
Cooking fire, confined to container
Unintentional alarm, other
Vehicle accident with injuries
Smoke detector activation/malfunction
Primary Situation

Fighting Fires

Average Amount of EMS Personnel: .3496

Most Active Battalion: B02, 93,706

Average Amount of Suppression Units: 2.51

Fighting Fires

```
--What is the average amount of EMS Personnel that arrive to a fire?
SELECT AVG("EMS_Personnel") as average
FROM fire_data;
```

	average numeric
1	0.34961886964507033

```
--Which battalion responded to the most fires?
SELECT "Battalion", COUNT("Battalion") as COUNT
FROM fire_data
GROUP BY "Battalion"
ORDER BY count DESC
LIMIT 1;
```

	Battalion text	count bigint
1	B02	93706

```
--What is the average amount of suppression units used against fires?
SELECT AVG("Suppression_Units") as average
FROM fire_data;
```

	average numeric
1	2.517622863968251

Deaths & Injuries

Most Deaths: 2

Average Injuries: .00026

Deaths & Injuries

```
--What is the most amount of deaths that occurred from a fire?
SELECT "Fire_Fatalities", COUNT("Fire_Fatalities") as COUNT
FROM fire_data
GROUP BY "Fire_Fatalities"
ORDER BY count DESC
LIMIT 2;
```

	Fire_Fatalities bigint	count bigint
1	0	622883
2	2	1

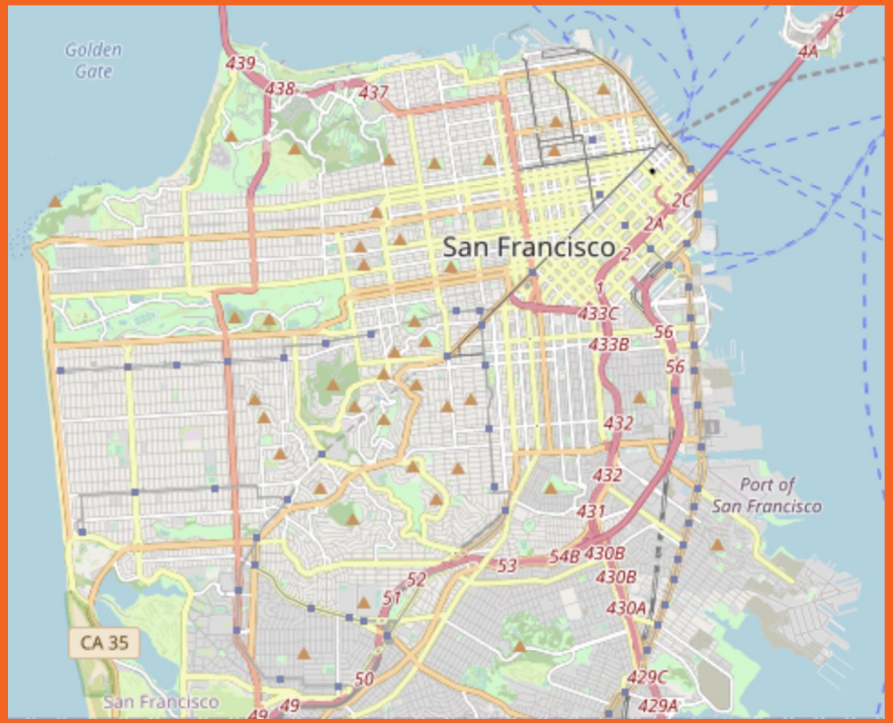
```
--What is the average amount of injuries per fire?
SELECT AVG("Fire_Injuries") as average
FROM fire_data;
```

	average numeric
1	0.0002584750932757945

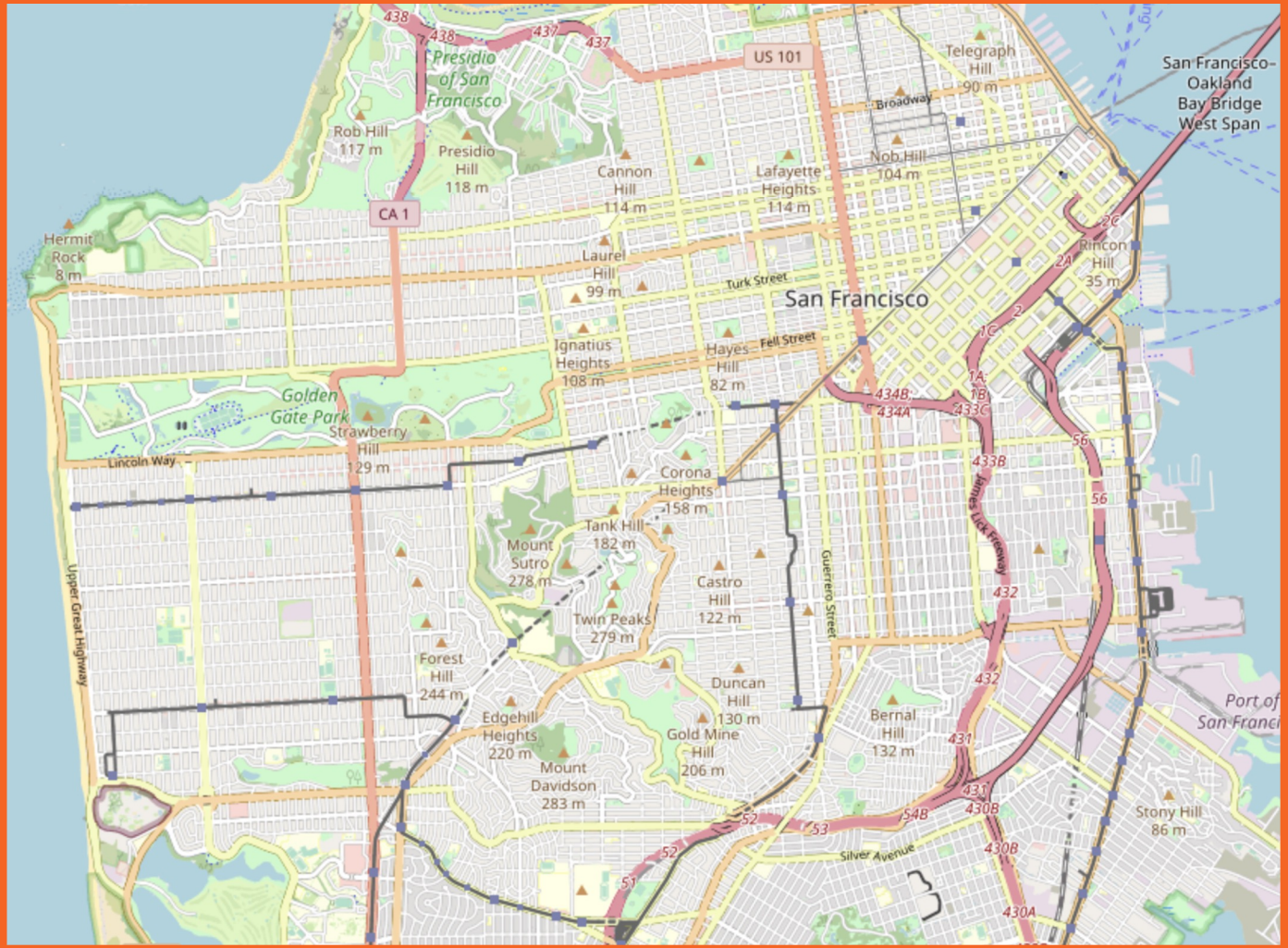
Leaflet Map

Javascript Code for Leaflet Map

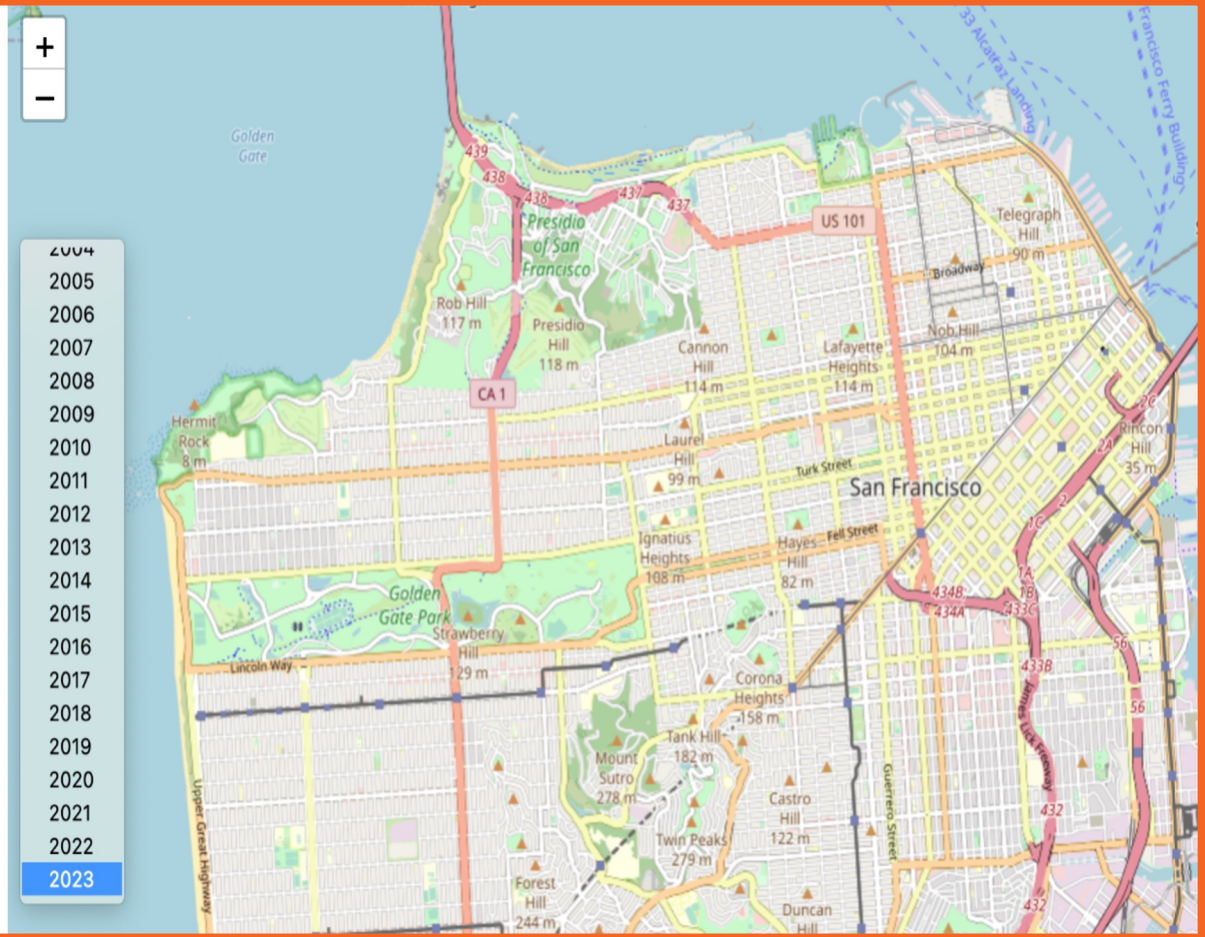
```
var map = L.map("map").setView([37.773972, -122.431297], 12);

L.tileLayer("https://tile.openstreetmap.org/{z}/{x}/{y}.png", {
    attribution: '&copy; <a href="https://www.openstreetmap.org/copyright">OpenStreetMap
}).addTo(map);

d3.csv('Resources/clean_data.csv').then(function(data){
    var heatLayer;
    function mapYear(){
        if (heatLayer){
            map.removeLayer(heatLayer);
        }
        let selector=d3.select('#selector')
        let dataset=selector.property('value')
        console.log(dataset);
        let currentYearFire=data.filter((fire)=>fire['year']==dataset)//.slice(0, 100);
        let currentYearFireCoords=currentYearFire.map(function(fire){
            return [parseFloat(fire['lat']), parseFloat(fire['lon']), 0.2]
        });

        heatLayer = L.heatLayer(currentYearFireCoords, {radius: 25})
        heatLayer.addTo(map);
        console.log(currentYearFireCoords);
    };

    let select=d3.select('#selector')
    select.on('change', mapYear)
});
```

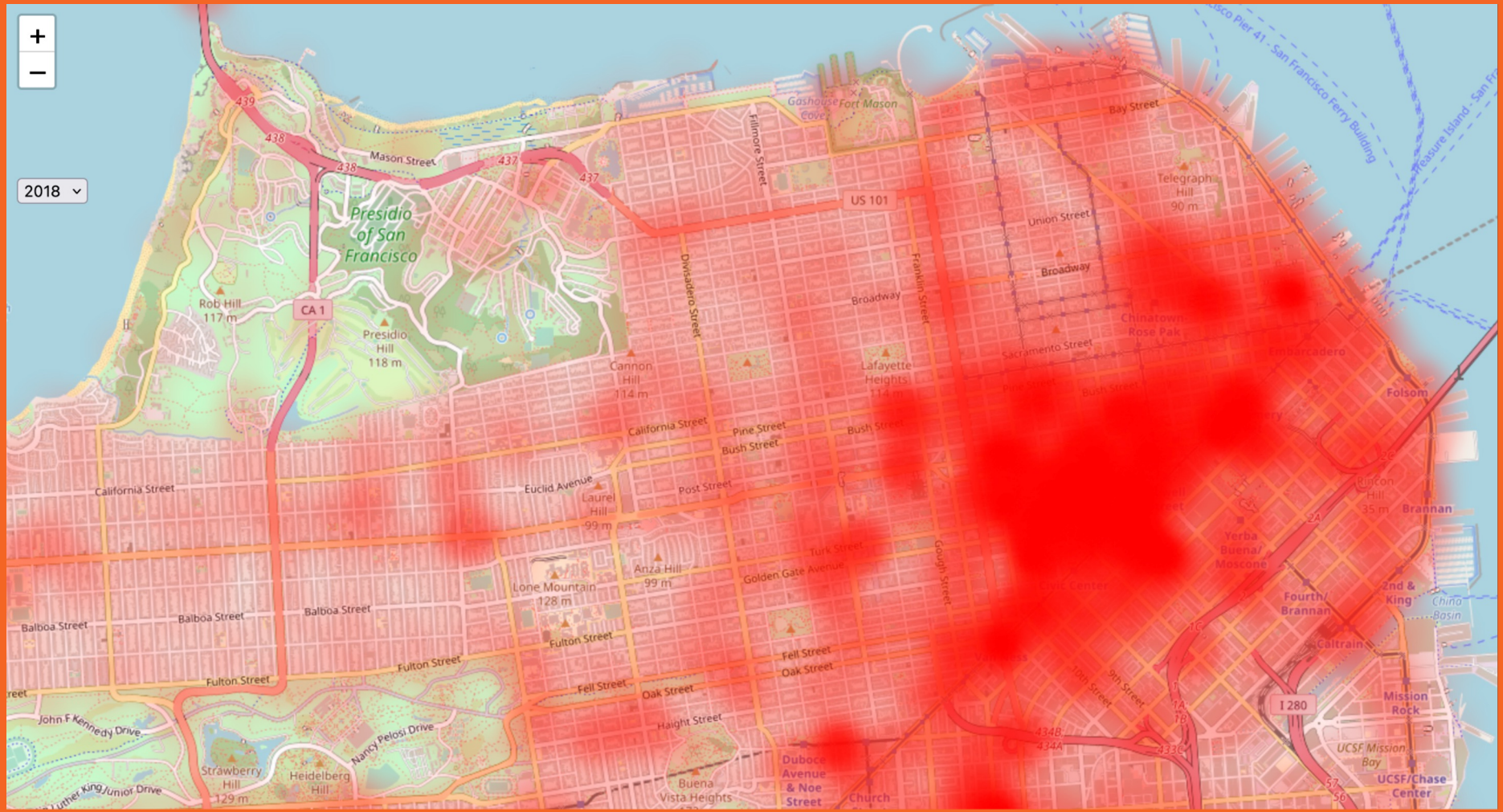


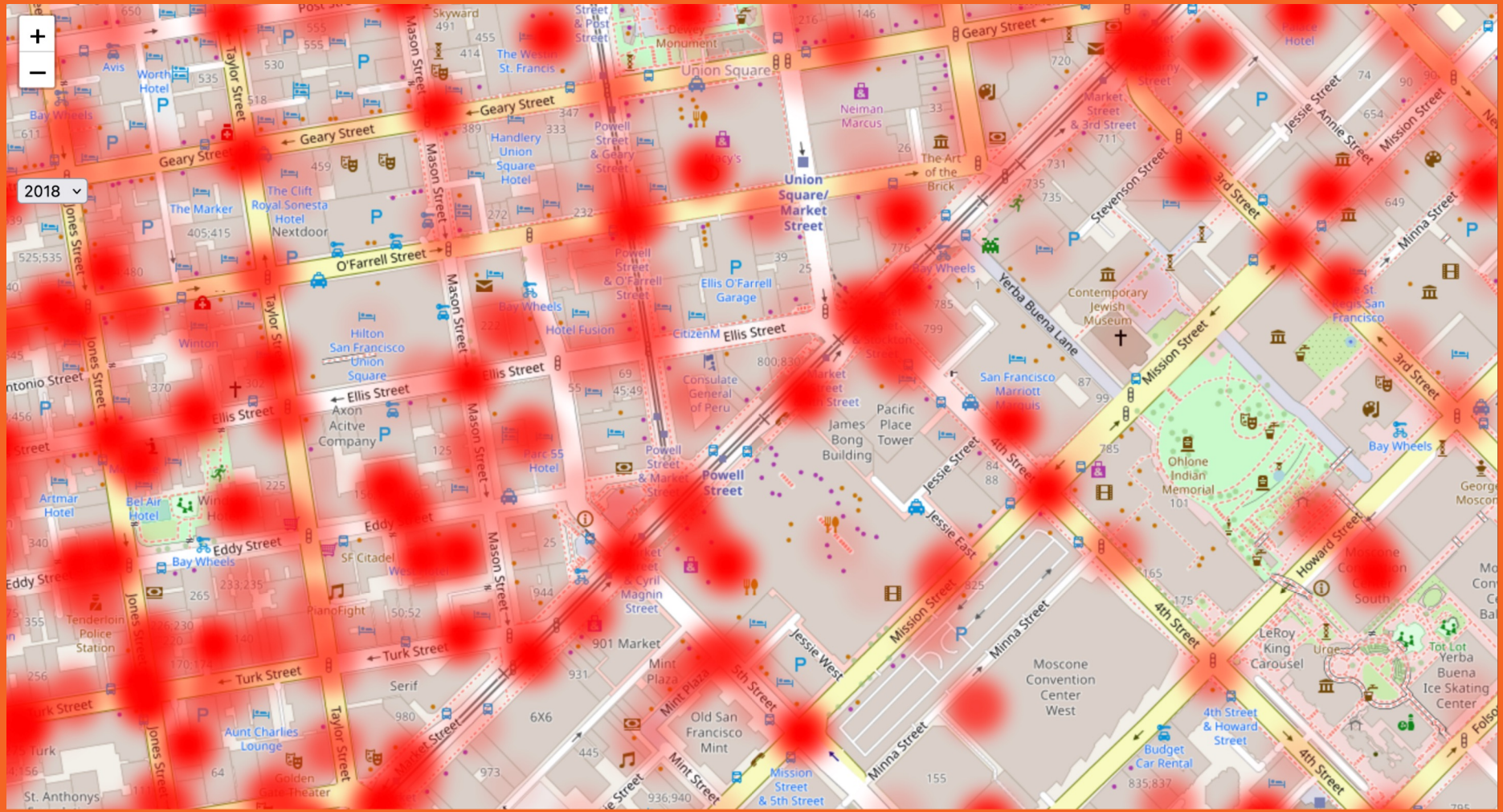
Leaflet Map

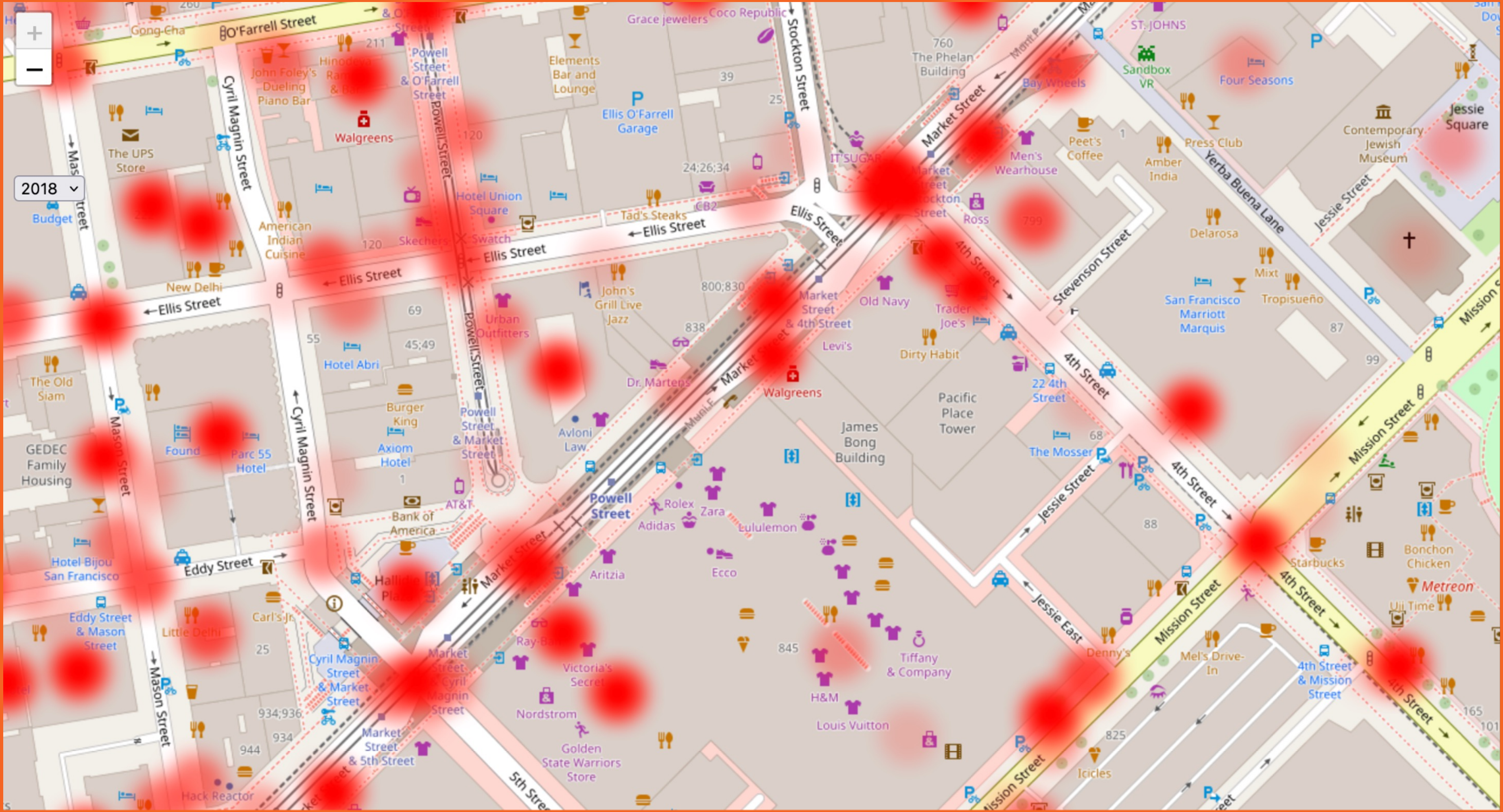

San Francisco
Presidio of San Francisco
Golden Gate Park
Rob Hill 117 m
Presidio Hill 118 m
Cannon Hill 114 m
Lafayette Heights 114 m
Nob Hill 104 m
Telegraph Hill 90 m
Rincon Hill 35 m
San Francisco–Oakland Bay Bridge West Span
Hermit Rock 8 m
Laurel Hill 99 m
Ignatius Heights 108 m
Hayes Hill 82 m
Strawberry Hill 129 m
Corona Heights 158 m
Tank Hill 182 m
Mount Sutro 278 m
Twin Peaks 279 m
Castro Hill 122 m
Forest Hill 244 m
Edgehill Heights 220 m
Mount Davidson 283 m
Duncan Hill 130 m
Gold Mine Hill 206 m
Bernal Hill 132 m
Stony Hill 86 m
US 101
CA 1
Turk Street
Fell Street
Lincoln Way
Upper Great Highway
Broadway
Guerrero Street
Silver Avenue
Port of San Francisco

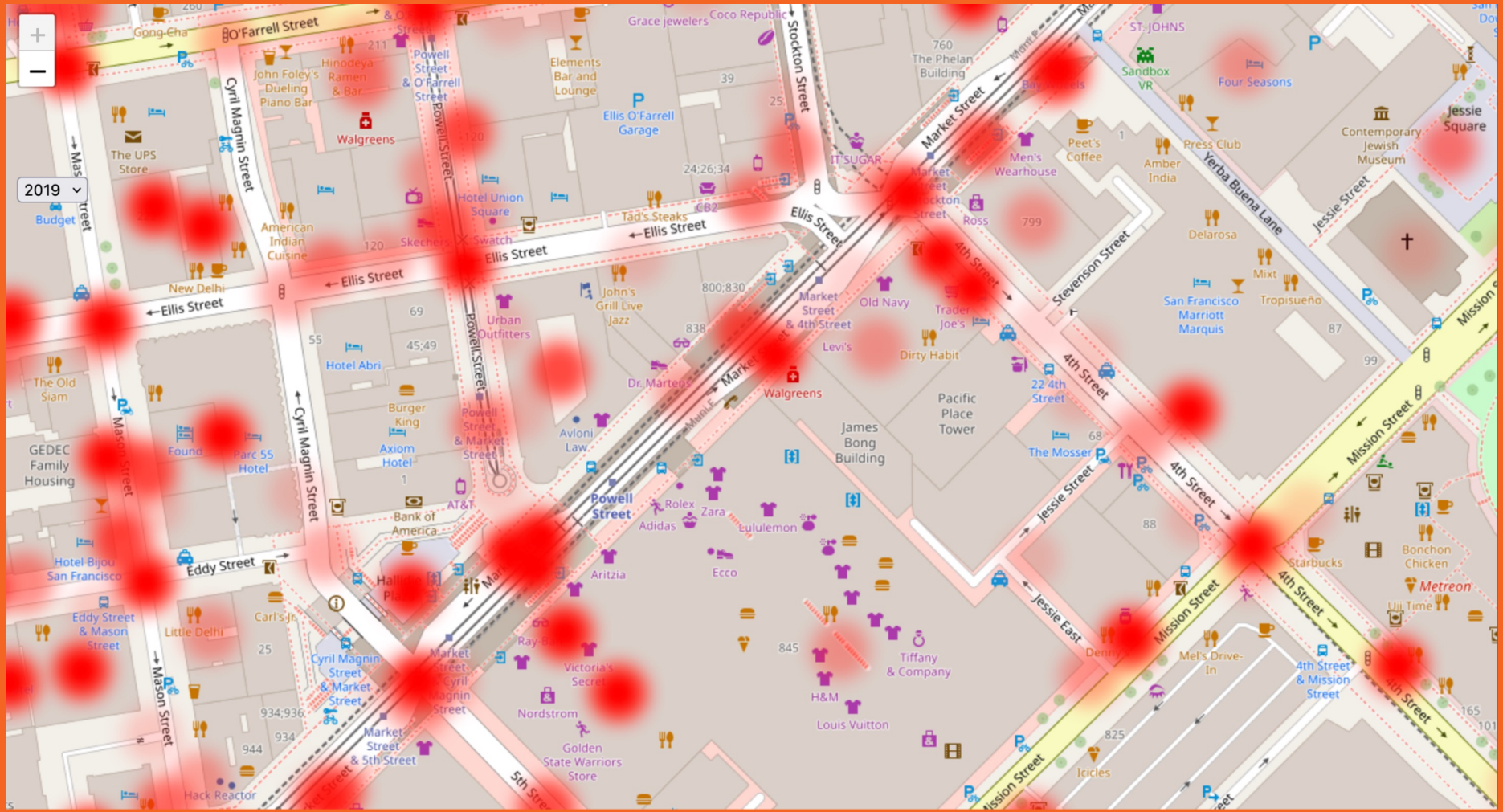
```
  <style>
    #selector_menu{
        position: absolute;
        top: 150px;
        left: 10px;
        z-index: 9000;
    }
  </style>
</head>
<body>
    <div id='selector_menu'>
        <select id='selector'>
          <option value = </option>
          <option value = "2003">2003</option>
          <option value = "2004">2004</option>
          <option value = "2005">2005</option>
          <option value = "2006">2006</option>
          <option value = "2007">2007</option>
          <option value = "2008">2008</option>
          <option value = "2009">2009</option>
          <option value = "2010">2010</option>
          <option value = "2011">2011</option>
          <option value = "2012">2012</option>
          <option value = "2013">2013</option>
          <option value = "2014">2014</option>
          <option value = "2015">2015</option>
          <option value = "2016">2016</option>
          <option value = "2017">2017</option>
          <option value = "2018">2018</option>
```

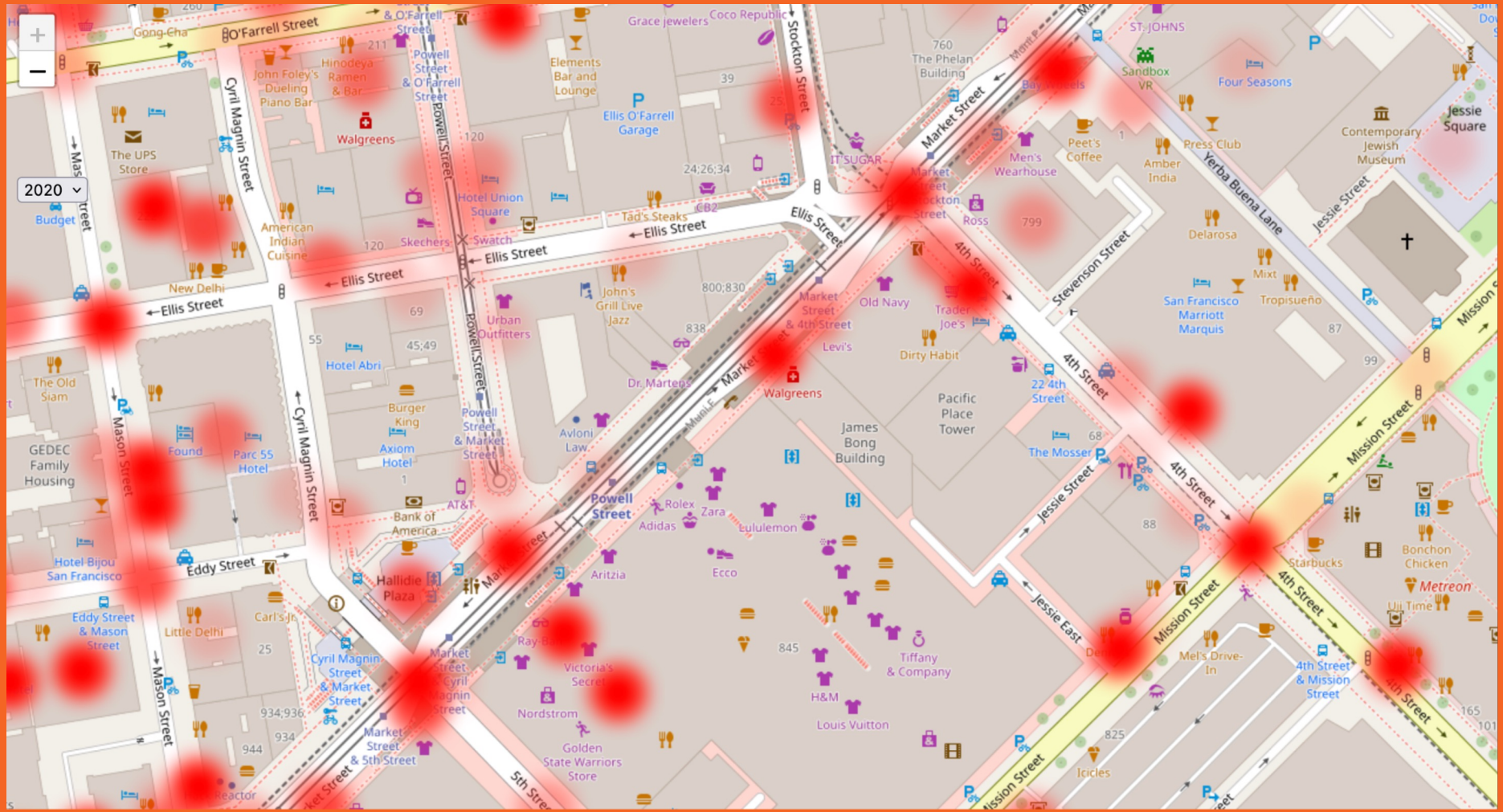


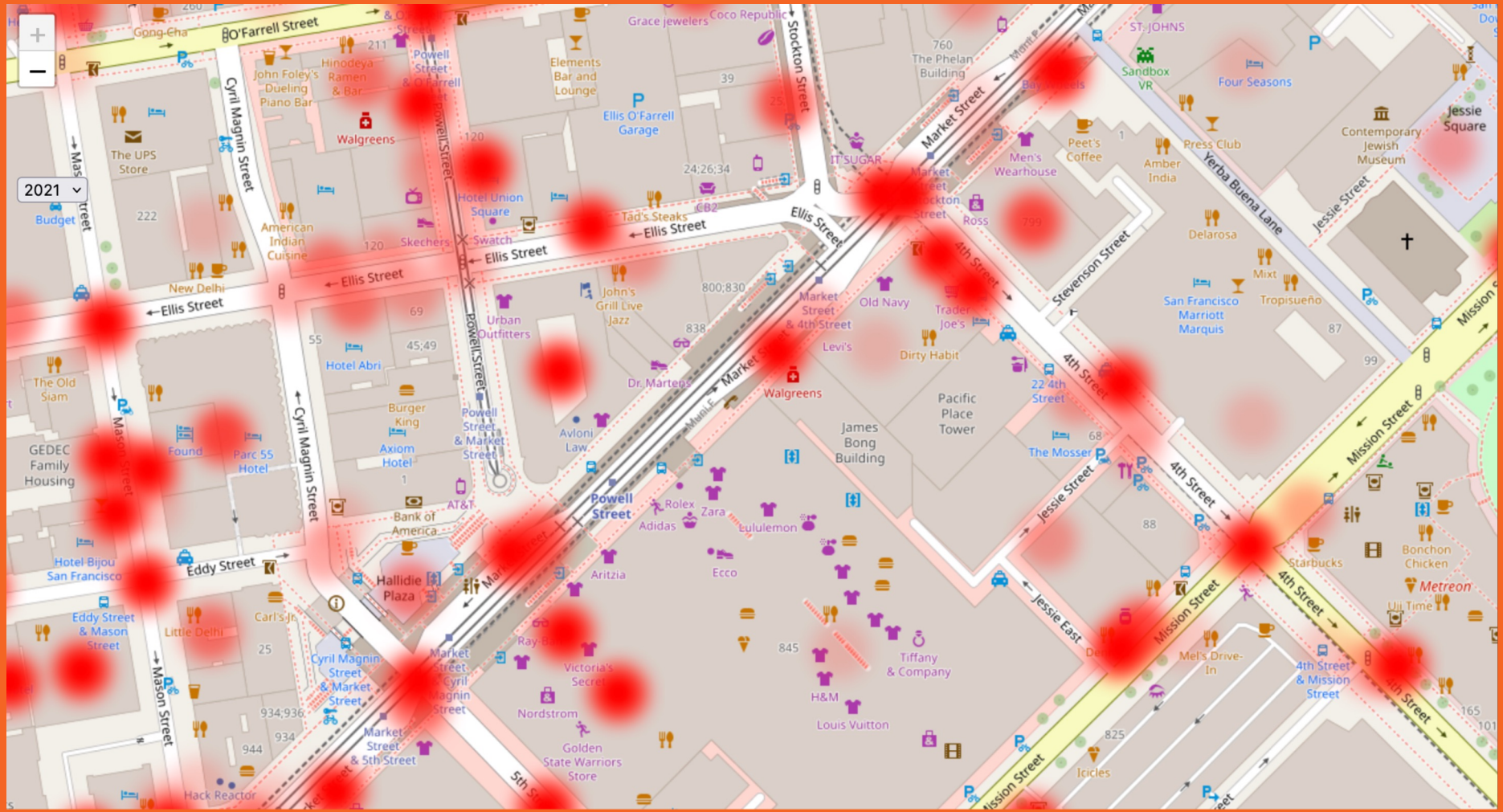

+
−
2018
Presidio of San Francisco
Rob Hill 117 m
Presidio Hill 118 m
Cannon Hill 114 m
Lafayette Heights 114 m
Laurel Hill 99 m
Anza Hill 99 m
Lone Mountain 128 m
Strawberry Hill 129 m
Heidelberg Hill
Buena Vista Heights
Telegraph Hill 90 m
Rincon Hill 35 m
Fort Mason
Gashouse Cove
Chinatown Rose Pak
Yerba Buena/ Moscone
Mission Rock
UCSF Mission Bay
UCSF/Chase Center
Caltrain
Folsom
Brannan
Fourth/ Brannan
2nd & King
China Basin
Embarcadero
Civic Center
Duboce Avenue & Noe Street
Church
US 101
CA 1
I 280
Mason Street
Bay Street
Union Street
Broadway
Sacramento Street
California Street
Pine Street
Bush Street
Euclid Avenue
Post Street
Turk Street
Golden Gate Avenue
Fell Street
Oak Street
Haight Street
Fulton Street
Balboa Street
John F Kennedy Drive
Nancy Pelosi Drive
Martin Luther King Junior Drive
Fillmore Street
Divisadero Street
Franklin Street
Gough Street
10th Street
9th Street
Pier 41 - San Francisco Ferry Building
Treasure Island - San Fr

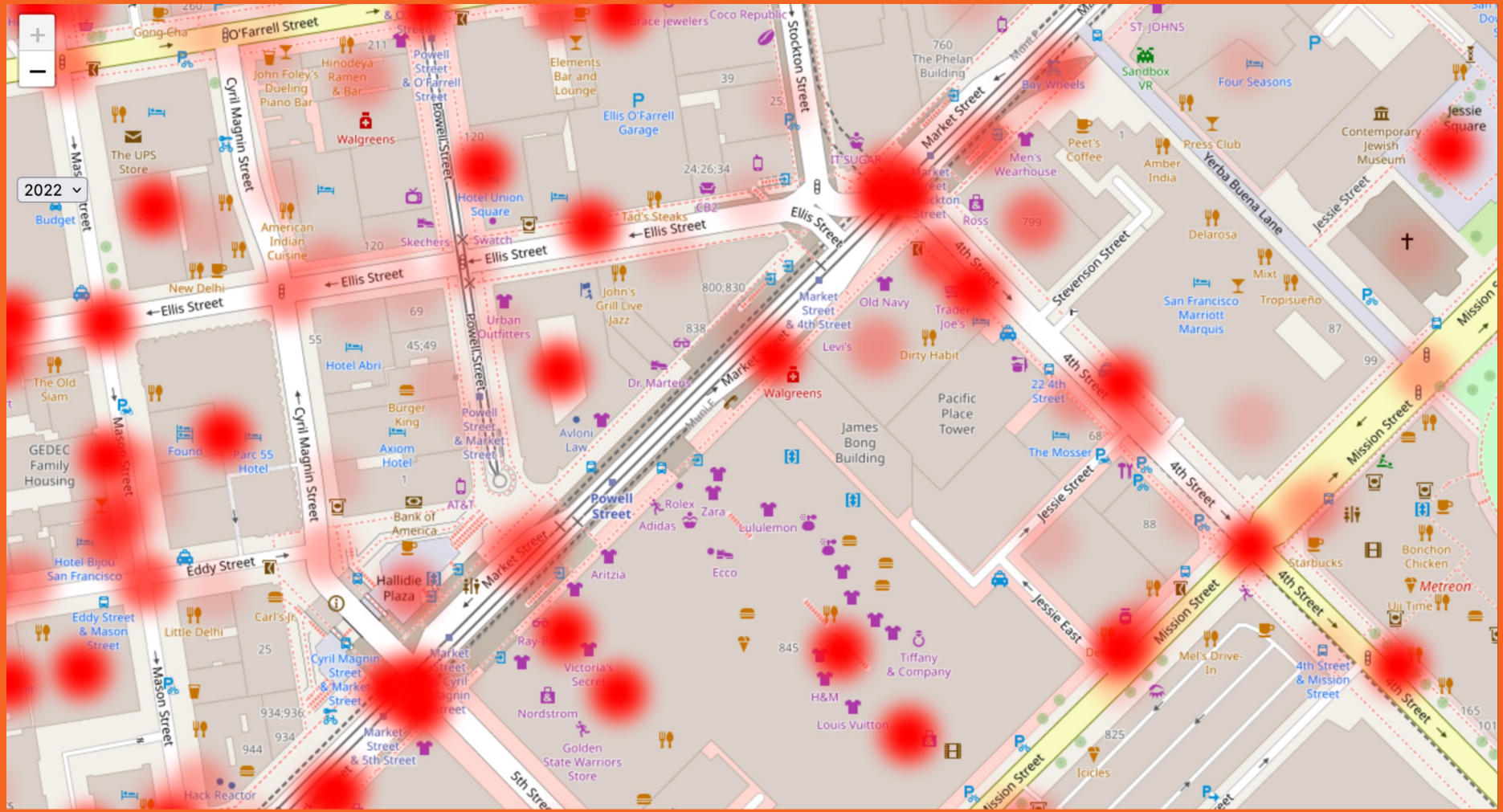

2018
Union Square
Union Square/ Market Street
Geary Street
O'Farrell Street
Ellis Street
Powell Street
Mason Street
Taylor Street
Jones Street
Turk Street
Eddy Street
Mission Street
Minna Street
Jessie Street
Jessie West
Jessie East
4th Street
5th Street
Howard Street
Stevenson Street
3rd Street
Annie Street
Jessie Street
Yerba Buena Lane
Mint Plaza
Mint Street
Market Street
Powell Street & Market Street
Powell Street & Geary Street
Powell Street & O'Farrell Street
Mission Street & 5th Street
4th Street & Howard Street
Market Street & 3rd Street
Union Square Hotel
Hilton San Francisco Union Square
Hotel Fusion
Ellis O'Farrell Garage
CitizenM
Consulate General of Peru
Axon Acitve Company
Pacific Place Tower
James Bong Building
San Francisco Marriott Marquis
Contemporary Jewish Museum
Ohlone Indian Memorial
Moscone Convention Center West
LeRoy King Carousel
Tot Lot
Yerba Buena Ice Skating Center
Budget Car Rental
Old San Francisco Mint
901 Market
6X6
Serif
PianoFight
SF Citadel
Aunt Charlies Lounge
Golden Gate Theater
Tenderloin Police Station
Bay Wheels
Neiman Marcus
The Art of the Brick
Worth Hotel
The Westin St. Francis
Handlery Union Square Hotel
The Clift Royal Sonesta Hotel
Nextdoor
The Marker
Winton
Axmar Hotel
Bel Air Hotel
Parc 55 Hotel
Skyward
Avis

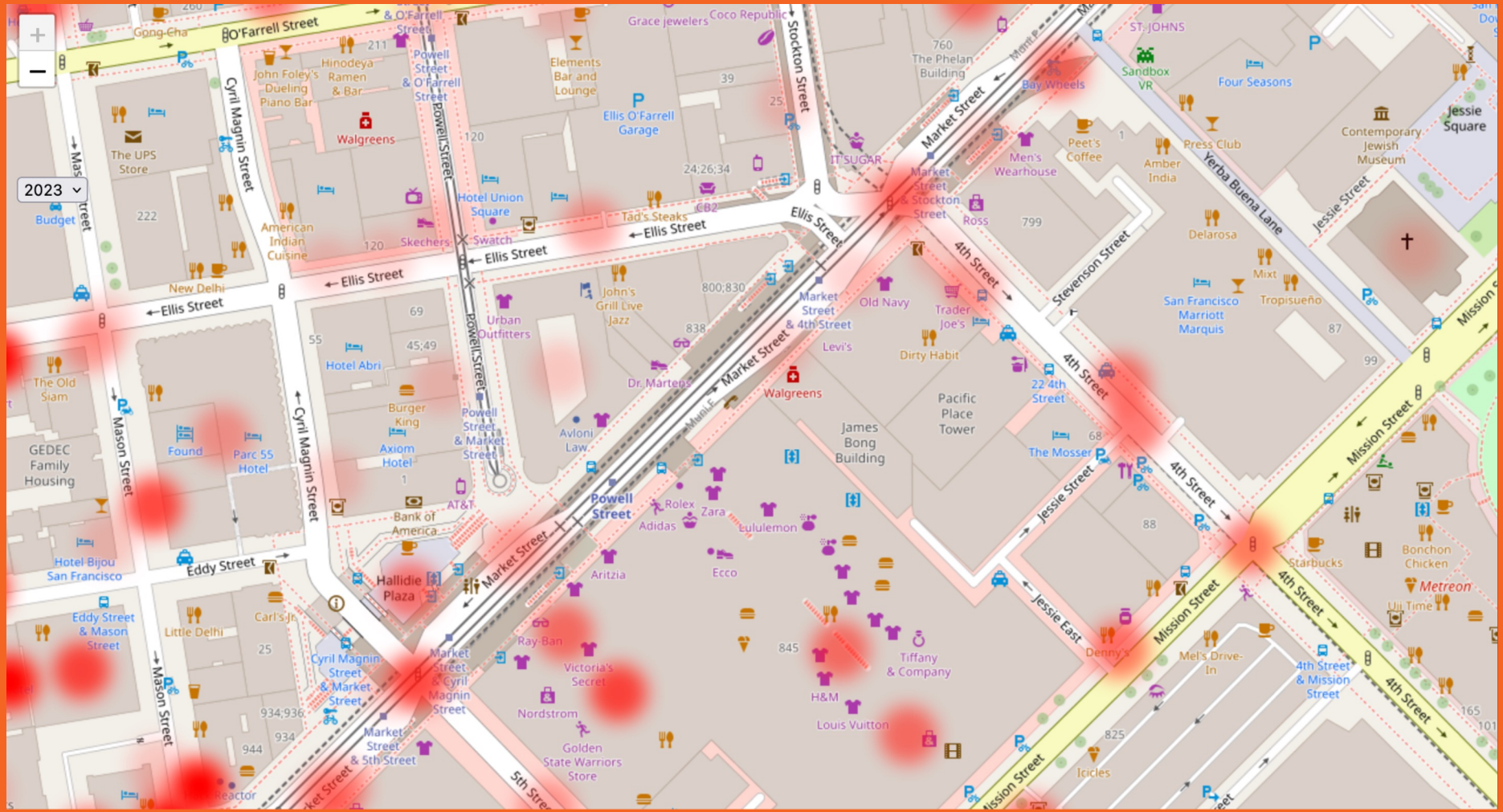

2018
O'Farrell Street
Ellis Street
Eddy Street
Market Street
Stockton Street
Powell Street
Cyril Magnin Street
Mason Street
4th Street
5th Street
Mission Street
Jessie Street
Jessie East
Stevenson Street
Yerba Buena Lane
Gong Cha
John Foley's Dueling Piano Bar
Walgreens
The UPS Store
Budget
American Indian Cuisine
New Delhi
Elements Bar and Lounge
Grace jewelers
Coco Republic
Ellis O'Farrell Garage
760 The Phelan Building
Hotel Union Square
Skechers
Swatch
Tad's Steaks
CB2
IT'SUGAR
Bay Wheels
Men's Wearhouse
Ross
Peet's Coffee
Amber India
Press Club
ST. JOHNS
Sandbox VR
Four Seasons
Contemporary Jewish Museum
Jessie Square
Delarosa
Mixt
Tropisueño
San Francisco Marriott Marquis
John's Grill Live Jazz
Urban Outfitters
Old Navy
Trader Joe's
Levi's
Dirty Habit
Hotel Abri
Burger King
Axiom Hotel
Dr. Martens
Avloni Law
Pacific Place Tower
James Bong Building
22 4th Street
The Mosser
The Old Siam
GEDEC Family Housing
Found
Parc 55 Hotel
Bank of America
AT&T
Powell Street & Market Street
Rolex
Zara
Adidas
Lululemon
Hotel Bijou San Francisco
Eddy Street & Mason Street
Little Delhi
Carl's Jr.
Aritzia
Ecco
Starbucks
Bonchon Chicken
Metreon
Cyril Magnin Street & Market Street
Market Street & Cyril Magnin Street
Market Street & 5th Street
Victoria's Secret
Nordstrom
Golden State Warriors Store
H&M
Louis Vuitton
Tiffany & Company
Denny's
Mel's Drive-In
4th Street & Mission Street
Icicles
Hack Reactor

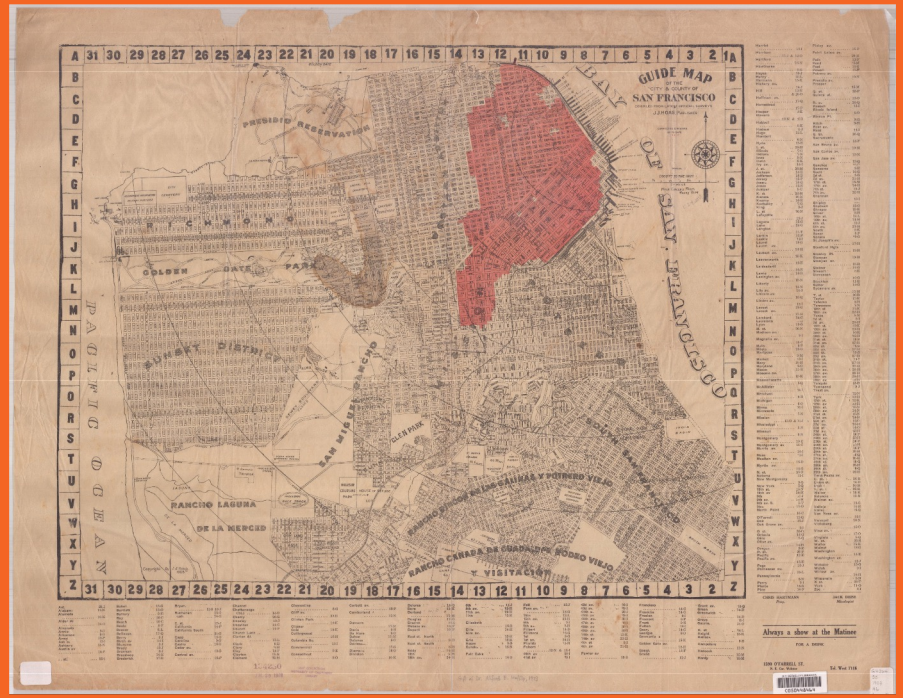

2019
O'Farrell Street
Powell Street
Cyril Magnin Street
Stockton Street
Market Street
Ellis Street
Mason Street
Eddy Street
Jessie Street
Yerba Buena Lane
Stevenson Street
4th Street
Mission Street
5th Street
Powell Street
Ellis O'Farrell Garage
Elements Bar and Lounge
Hotel Union Square
Walgreens
The UPS Store
American Indian Cuisine
New Delhi
Urban Outfitters
John's Grill Live Jazz
Hotel Abri
Burger King
Axiom Hotel
Dr. Martens
Market Street & 4th Street
Old Navy
Levi's
Dirty Habit
Trader Joe's
Pacific Place Tower
James Bong Building
Avloni Law
Rolex
Adidas
Zara
Lululemon
Ecco
Aritzia
Tiffany & Company
H&M
Louis Vuitton
Victoria's Secret
Nordstrom
Golden State Warriors Store
Bank of America
AT&T
Hotel Bijou San Francisco
Eddy Street & Mason Street
Little Delhi
Carl's Jr.
Cyril Magnin Street & Market Street
Market Street & Cyril Magnin Street
Market Street & 5th Street
Hack Reactor
GEDEC Family Housing
Found
Parc 55 Hotel
The Old Siam
Budget
Skechers
Swatch
Tad's Steaks
Grace Jewelers
Coco Republic
Hinodeya Ramen & Bar
John Foley's Dueling Piano Bar
Gong-Cha
Powell Street & O'Farrell Street
The Phelan Building
ST. JOHNS
Sandbox VR
Four Seasons
Contemporary Jewish Museum
Jessie Square
Peet's Coffee
Press Club
Amber India
Men's Wearhouse
IT'SUGAR
Ross
Delarosa
Mixt
Tropisueño
San Francisco Marriott Marquis
22 4th Street
The Mosser
Starbucks
Bonchon Chicken
Metreon
Mel's Drive-In
4th Street & Mission Street
Icicles
Jessie East
Powell Street & Market Street


2020
O'Farrell Street
Ellis Street
Market Street
Powell Street
Stockton Street
Cyril Magnin Street
Mason Street
Eddy Street
Jessie Street
Yerba Buena Lane
Stevenson Street
4th Street
Mission Street
Jessie East
5th Street
Gong-Cha
John Foley's Dueling Piano Bar
Hinodeya Ramen & Bar
Walgreens
The UPS Store
Budget
American Indian Cuisine
New Delhi
Hotel Union Square
Skechers
Swatch
Tad's Steaks
CB2
Grace Jewelers
Coco Republic
Elements Bar and Lounge
Ellis O'Farrell Garage
IT'SUGAR
The Phelan Building
Sandbox VR
ST. JOHNS
Four Seasons
Peet's Coffee
Men's Wearhouse
Press Club
Amber India
Contemporary Jewish Museum
Jessie Square
Ross
Delarosa
Mixt
Tropisueño
San Francisco Marriott Marquis
Old Navy
Trader Joe's
Dirty Habit
Levi's
Urban Outfitters
John's Grill Live Jazz
Market Street & 4th Street
Dr. Martens
Walgreens
Pacific Place Tower
James Bong Building
22 4th Street
The Mosser
Hotel Abri
Burger King
Axiom Hotel
Powell Street & Market Street
Avloni Law
Rolex
Adidas
Zara
Lululemon
Ecco
Aritzia
Tiffany & Company
H&M
Louis Vuitton
Victoria's Secret
Nordstrom
Golden State Warriors Store
Bank of America
AT&T
Hallidie Plaza
Cyril Magnin Street & Market Street
Market Street & 5th Street
Hotel Bijou San Francisco
Eddy Street & Mason Street
Little Delhi
Carl's Jr.
Found
Parc 55 Hotel
GEDEC Family Housing
The Old Siam
Starbucks
Bonchon Chicken
Metreon
Mel's Drive-In
4th Street & Mission Street
Icicles


2021
O'Farrell Street
Cyril Magnin Street
Powell Street
Stockton Street
Market Street
Ellis Street
Eddy Street
Mason Street
Jessie Street
Yerba Buena Lane
Stevenson Street
4th Street
Mission Street
Jessie East
Powell Street
Hallidie Plaza
Gong-Cha
John Foley's Dueling Piano Bar
Hinodeya Ramen & Bar
Walgreens
The UPS Store
Budget
American Indian Cuisine
New Delhi
Skechers
Hotel Union Square
Swatch
Tad's Steaks
Grace jewelers
Coco Republic
Elements Bar and Lounge
Ellis O'Farrell Garage
IT'SUGAR
The Phelan Building
Sandbox VR
ST. JOHNS
Four Seasons
Peet's Coffee
Press Club
Amber India
Men's Wearhouse
Ross
Contemporary Jewish Museum
Jessie Square
Delarosa
Mixt
Tropisueño
San Francisco Marriott Marquis
Old Navy
Trader Joe's
Dirty Habit
Levi's
Market Street & 4th Street
Urban Outfitters
John's Grill Live Jazz
Hotel Abri
Dr. Martens
Walgreens
Pacific Place Tower
James Bong Building
22 4th Street
The Mosser
Avloni Law
Burger King
Axiom Hotel
Bank of America
AT&T
Rolex
Adidas
Zara
Lululemon
Ecco
Aritzia
Tiffany & Company
H&M
Louis Vuitton
Victoria's Secret
Nordstrom
Golden State Warriors Store
Ray-Ban
Cyril Magnin Street & Market Street
Market Street & 5th Street
Market Street & Cyril Magnin Street
Powell Street & Market Street
Eddy Street & Mason Street
Hotel Bijou San Francisco
Found
Parc 55 Hotel
GEDEC Family Housing
The Old Siam
Little Delhi
Carl's Jr.
Hack Reactor
Starbucks
Bonchon Chicken
Metreon
Mel's Drive-In
4th Street & Mission Street
Icicles


2022
O'Farrell Street
Powell Street
Cyril Magnin Street
Stockton Street
Market Street
Ellis Street
Ellis O'Farrell Garage
Elements Bar and Lounge
Hotel Union Square
Walgreens
The UPS Store
John Foley's Dueling Piano Bar
Hinodeya Ramen & Bar
American Indian Cuisine
New Delhi
Skechers
Swatch
Tad's Steaks
Urban Outfitters
John's Grill Live Jazz
Hotel Abri
Burger King
Axiom Hotel
Dr. Martens
Avloni Law
Powell Street & Market Street
Market Street & 4th Street
Old Navy
Levi's
Dirty Habit
Trader Joe's
Walgreens
Pacific Place Tower
James Bong Building
The Mosser
22 4th Street
Rolex
Zara
Adidas
lululemon
Ecco
Aritzia
Tiffany & Company
H&M
Louis Vuitton
Victoria's Secret
Nordstrom
Golden State Warriors Store
Bank of America
AT&T
Hallidie Plaza
Ray-Ban
Carl's Jr
Little Delhi
Hotel Bijou San Francisco
Eddy Street & Mason Street
Eddy Street
Found
Parc 55 Hotel
GEDEC Family Housing
The Old Siam
Hack Reactor
Cyril Magnin Street & Market Street
Market Street & 5th Street
Mason Street
Budget
Coco Republic
Grace Jewelers
760 The Phelan Building
ST. JOHNS
Sandbox VR
Bay Wheels
Four Seasons
Peet's Coffee
Press Club
Amber India
Men's Wearhouse
Ross
Delarosa
Contemporary Jewish Museum
Jessie Square
Yerba Buena Lane
Jessie Street
Stevenson Street
4th Street
San Francisco Marriott Marquis
Mixt
Tropisueño
Mission Street
Jessie East
Starbucks
Bonchon Chicken
Metreon
Mel's Drive-In
4th Street & Mission Street
Icicles
5th Street


2023
O'Farrell Street
Ellis Street
Market Street
Powell Street
Stockton Street
Cyril Magnin Street
Mason Street
Eddy Street
4th Street
Jessie Street
Mission Street
Yerba Buena Lane
Stevenson Street
Gong-Cha
Hinodeya Ramen & Bar
John Foley's Dueling Piano Bar
Walgreens
The UPS Store
Budget
American Indian Cuisine
New Delhi
Skechers
Hotel Union Square
Swatch
Tad's Steaks
Elements Bar and Lounge
Ellis O'Farrell Garage
Grace jewelers
Coco Republic
Urban Outfitters
John's Grill Live Jazz
Hotel Abri
Burger King
Axiom Hotel
Dr. Martens
Avloni Law
Bank of America
AT&T
Hallidie Plaza
Rolex
Adidas
Zara
Lululemon
Ecco
Aritzia
Ray-Ban
Victoria's Secret
Nordstrom
Golden State Warriors Store
Tiffany & Company
H&M
Louis Vuitton
Market Street & Cyril Magnin Street
Market Street & 5th Street
Cyril Magnin Street & Market Street
Powell Street & Market Street
Powell Street & O'Farrell Street
Market Street & 4th Street
Market Street & Stockton Street
Eddy Street & Mason Street
Hotel Bijou San Francisco
Little Delhi
Carl's Jr.
Found
Parc 55 Hotel
The Old Siam
GEDEC Family Housing
The Phelan Building
James Bong Building
Pacific Place Tower
Old Navy
Levi's
Dirty Habit
Trader Joe's
Walgreens
22 4th Street
The Mosser
Ross
Men's Wearhouse
Peet's Coffee
Amber India
Press Club
Four Seasons
Bay Wheels
Sandbox VR
ST. JOHNS
IT'SUGAR
Contemporary Jewish Museum
Jessie Square
Delarosa
Mixt
Tropisueño
San Francisco Marriott Marquis
Starbucks
Bonchon Chicken
Metreon
Denny's
Mel's Drive-In
4th Street & Mission Street
Icicles
Jessie East



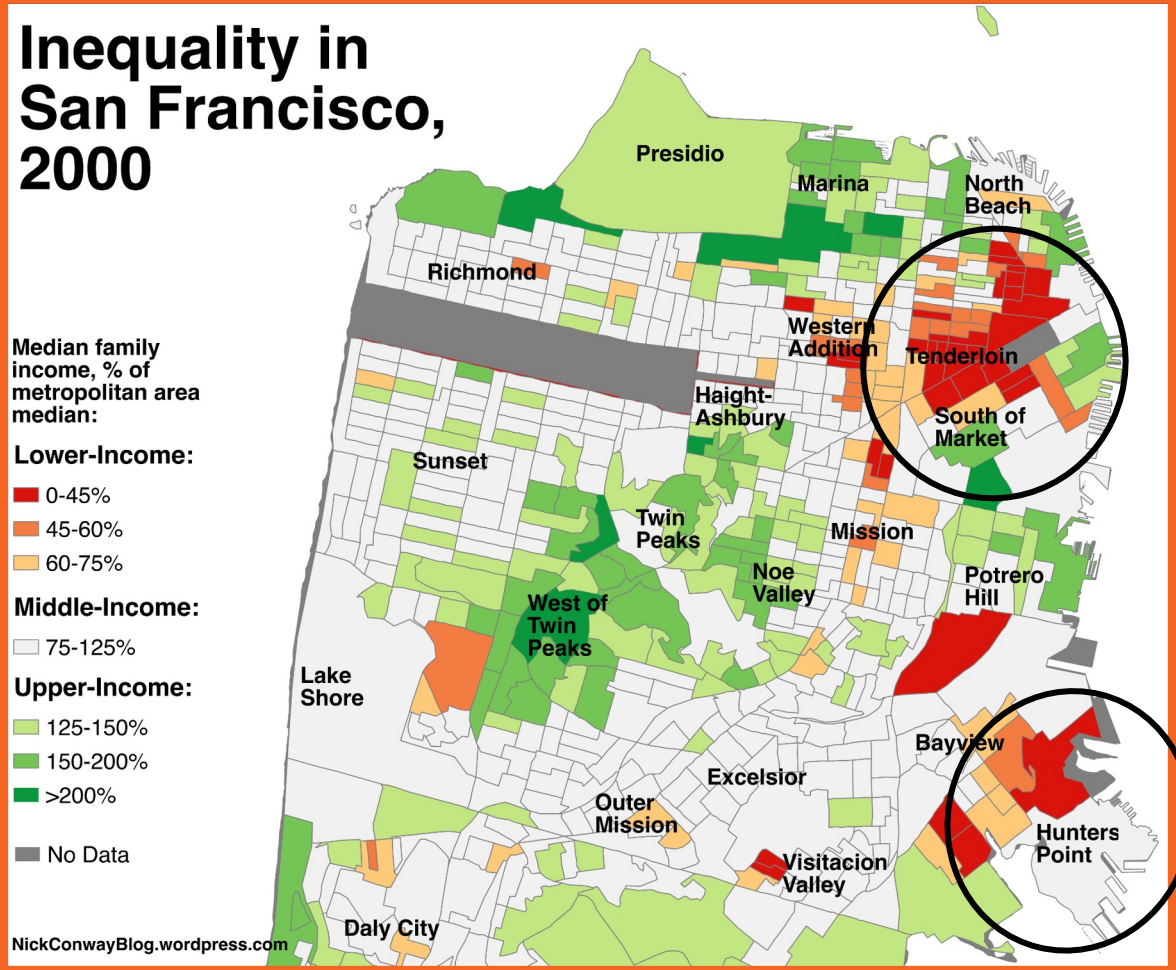
Buried ship map

1906 fire and 1915 Panama–Pacific International Exposition

Pacific Ocean

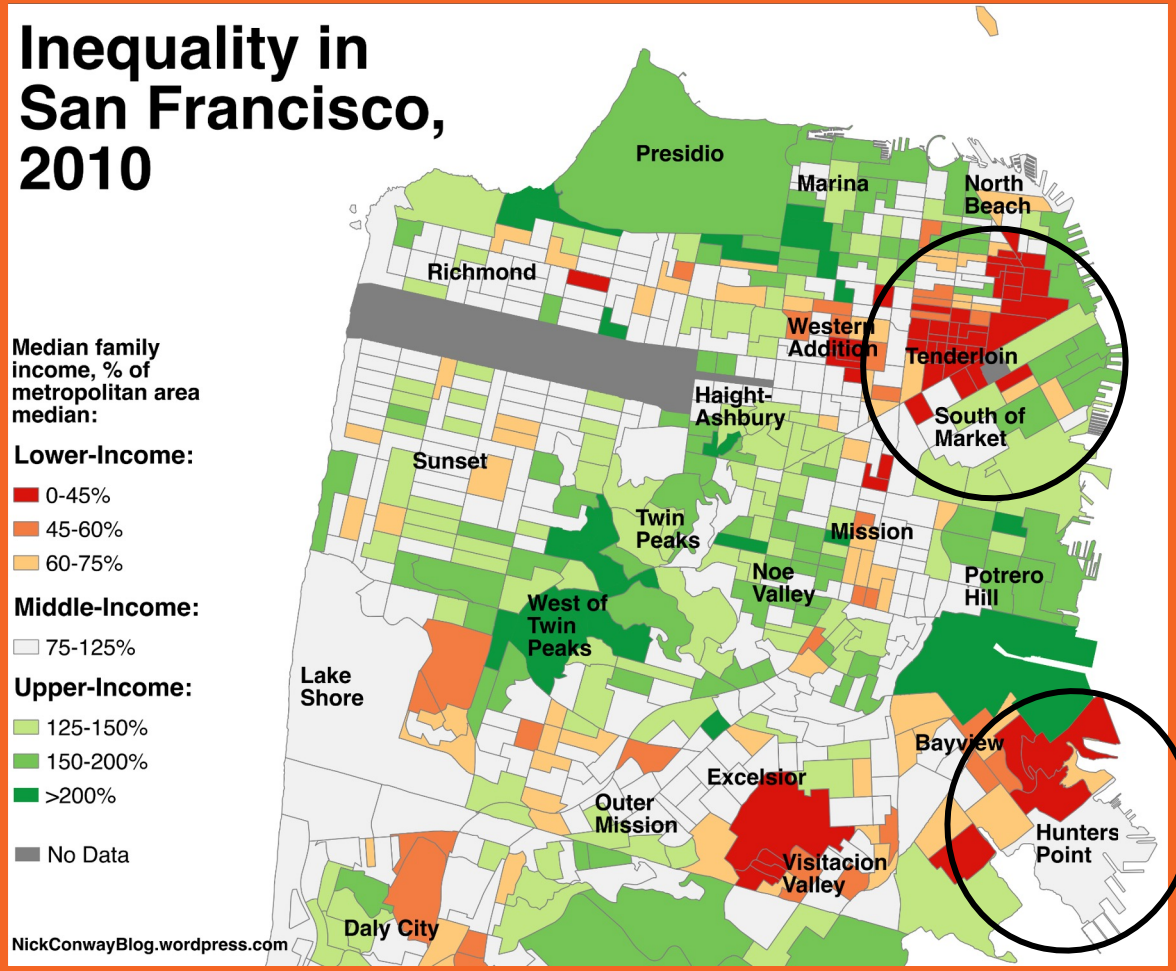
San Francisco Bay

Inequality in San Francisco, 2000



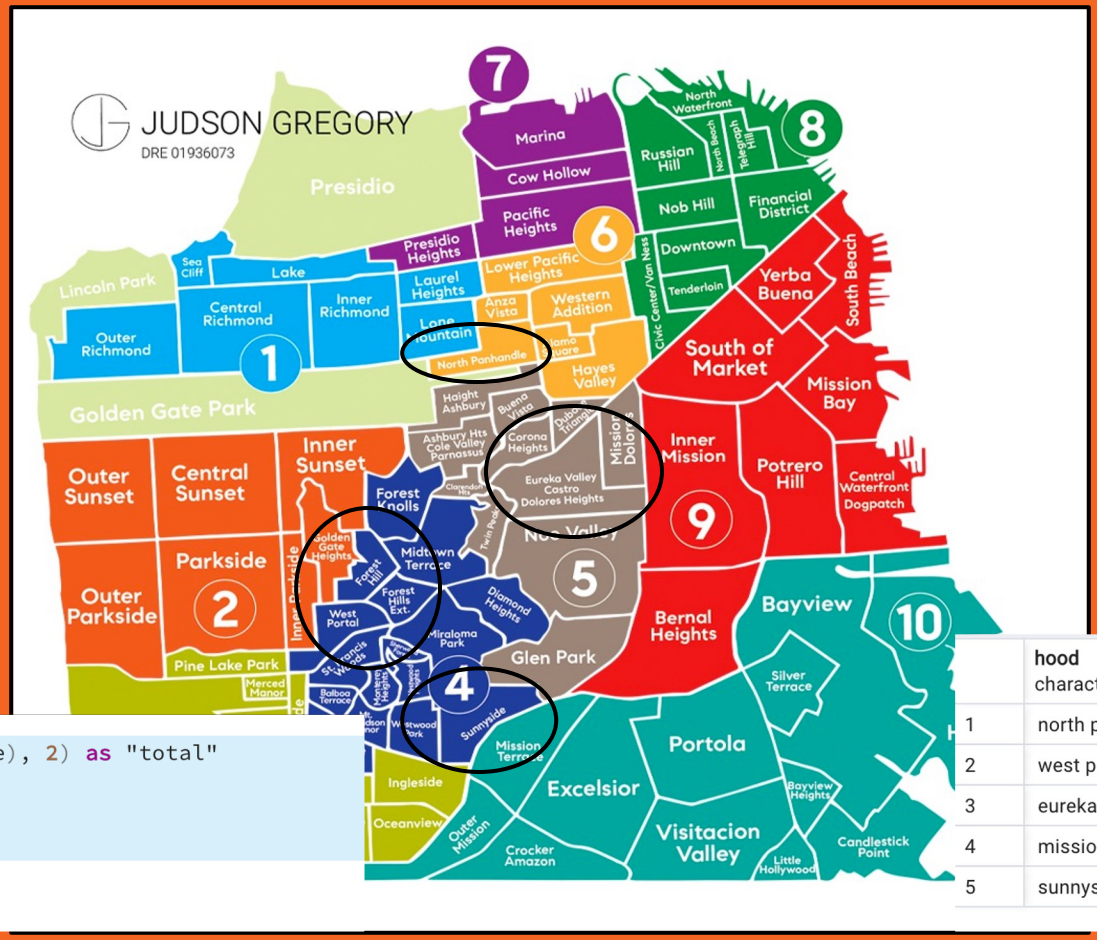
Pacific Ocean

San Francisco Bay



Pacific Ocean

San Francisco Bay



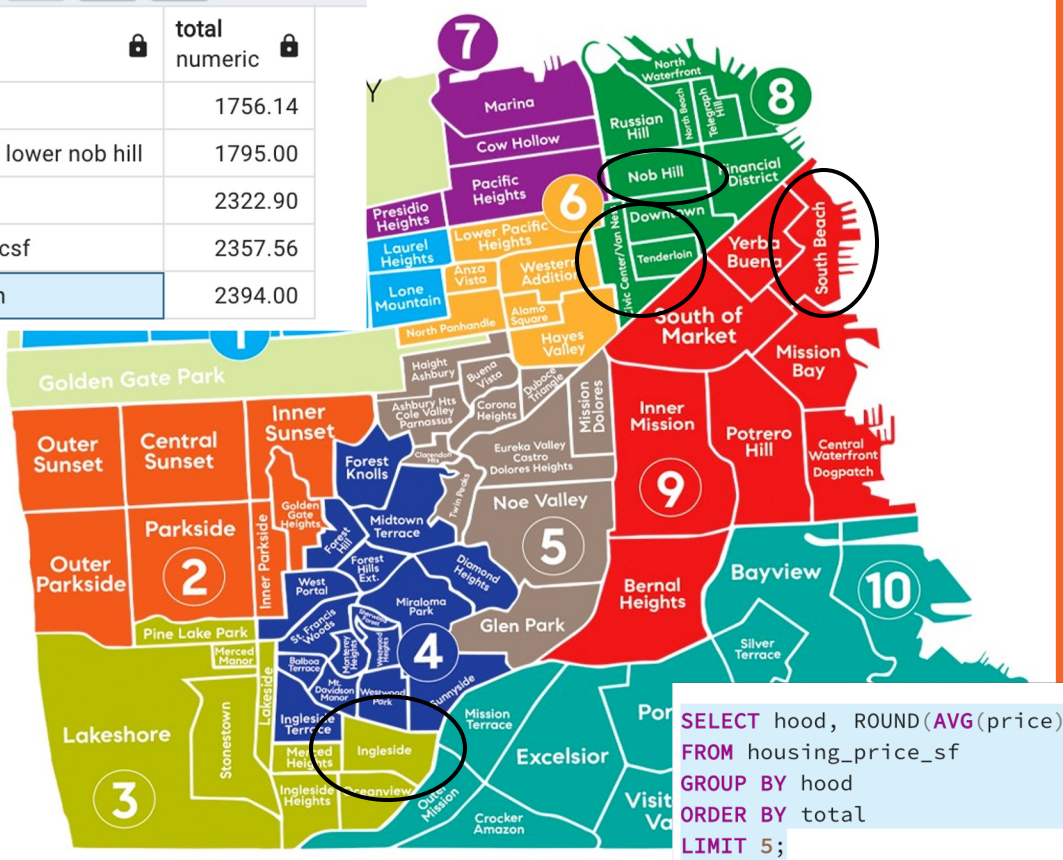

```
SELECT hood, ROUND(AVG(price), 2) as "total"
FROM housing_price_sf
GROUP BY hood
ORDER BY total
LIMIT 5;
```

	hood character varying	total numeric
1	north panhandle	6500.00
2	west portal / forest hill	5754.88
3	eureka valley	5595.00
4	mission dolores	5517.50
5	sunnyside	5100.00

Pacific Ocean

San Francisco Bay

	hood character varying	total numeric
1	tenderloin	1756.14
2	van ness corridor / lower nob hill	1795.00
3	lower nob hill	2322.90
4	ingleside / sfsu / ccsf	2357.56
5	soma/ south beach	2394.00




```sql
SELECT hood, ROUND(AVG(price), 2) as "total"
FROM housing_price_sf
GROUP BY hood
ORDER BY total
LIMIT 5;
```

THE END