

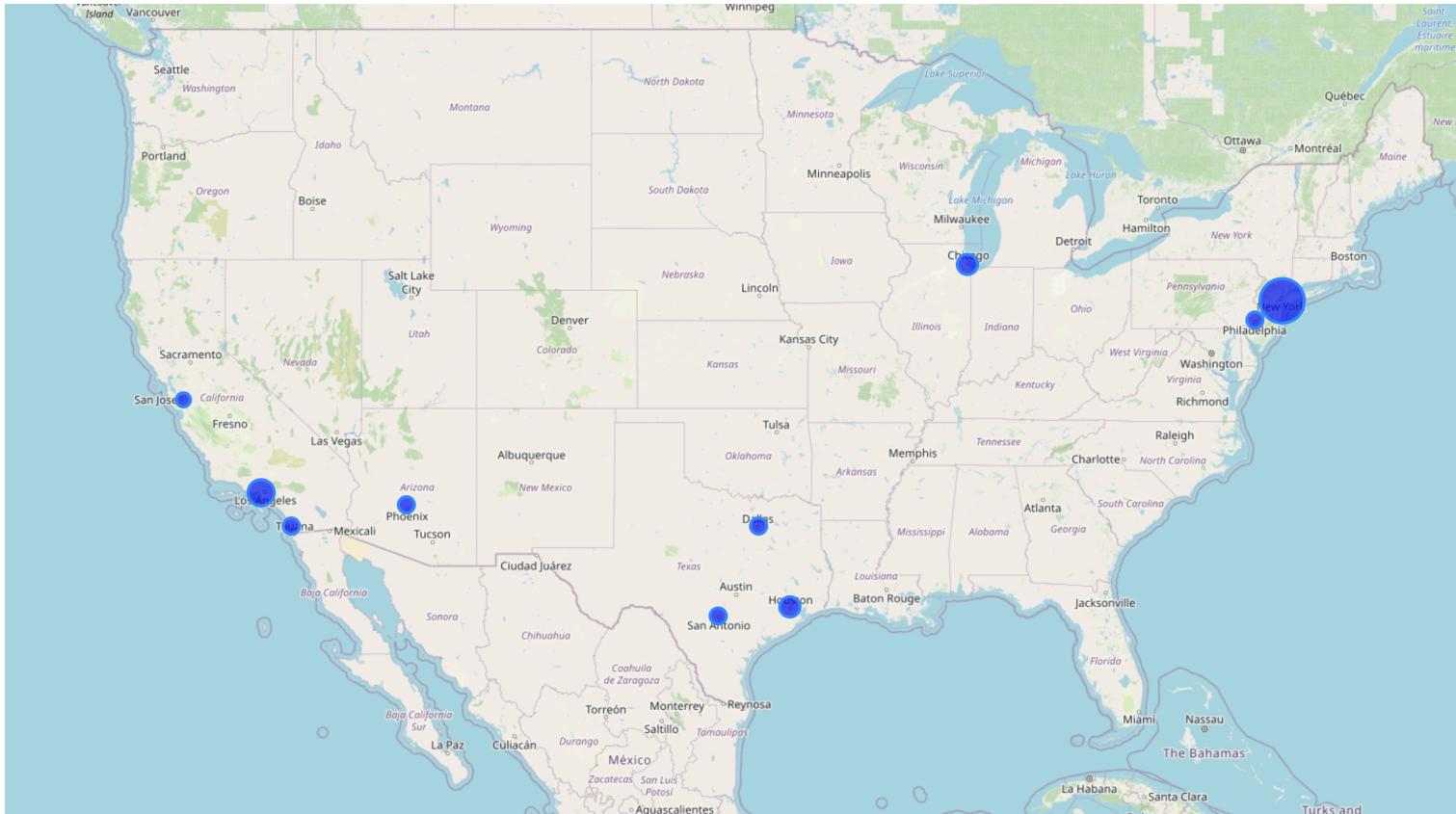
# Placement of The Tech Museum

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## How to find the best location for a technology museum?

It would have to be in one of the largest cities as that improves the chances that there would be enough visitors.



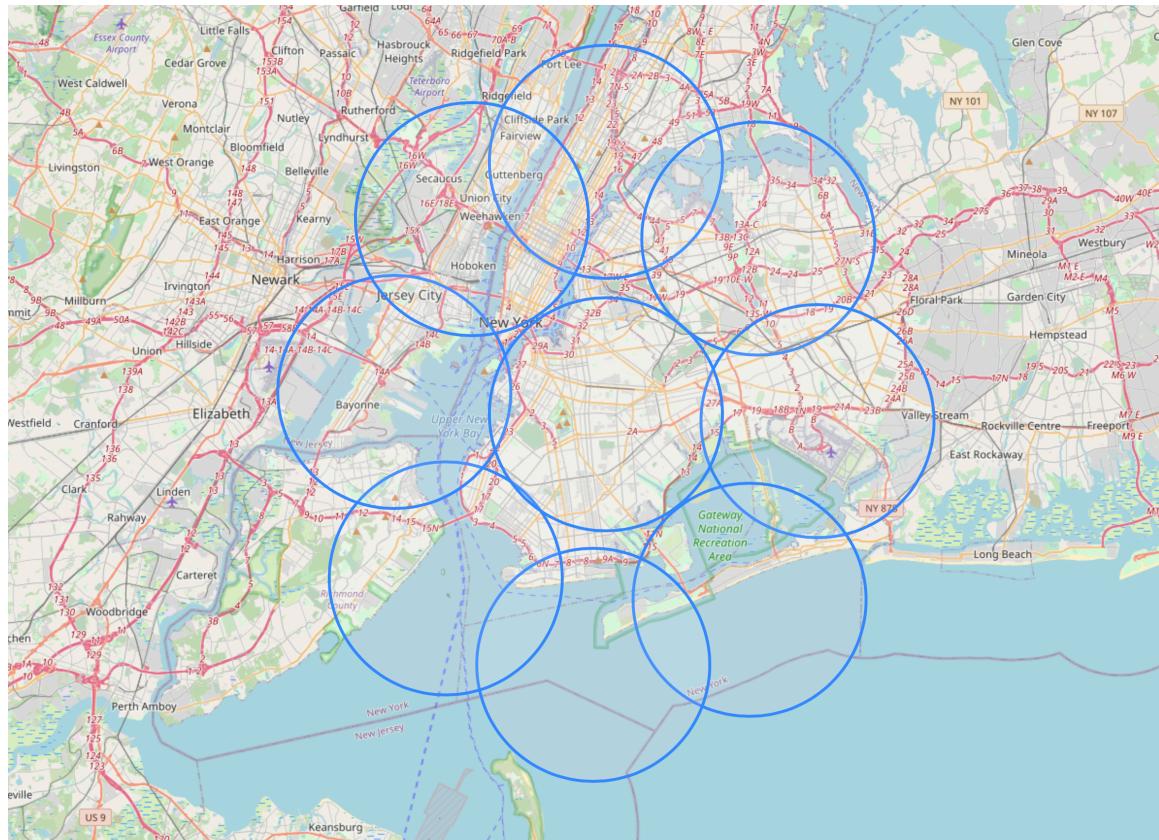
We would also want to look at similarities with other places where there are already such museums located.

Pick a number of candidate locations from each of these cities following a “flower-pattern” like this:

We can start looking for similarities between those candidates that have several museums already.

We could look for similarities in many way; manually by studying the data, visually by trying to visualize the deciding factors in graphs or programmatically with machine learning models.

## If we then...



## Machine learning

Seems like the obvious solution as it quickly becomes difficult to see the patterns as we add more deciding parameters.

So by looking at city population size, number of technology museums, restaurants, public transportation sites and higher learning institutions nearby we are able to train the ML models to predict how many science museums a given locality should theoretically be able to hold.

Now by running the data from those locations **without** any technology museums the ML models will tell us how many technology museums there should be in the location which is the same as how good the location is for the placement.

"The Web as I envisaged it, we have not seen it yet. The future is still so much bigger than the past."

*Tim Berners-Lee, Inventor of the World*

## Now it is a simple matter of...

Sorting the output from the ML models, and sort them in descending order. The highest placement (most predicted museums) will be the best candidate.

The models agree:

Dense model top 3 candidate locations:

	city	latitude	longitude	valid	museum_count	restaurant_count	transportation_count	institution_count	dense	linear
61	San Antonio	29.577101	-98.619790	1	0	4	0	10	5.263879	14.194014
22	Chicago	41.702830	-87.690556	1	0	1	1	1	4.965051	6.145692
33	Houston	29.798412	-95.540325	1	0	22	0	1	4.829288	0.015684

Linear regression model top 3 candidate locations:

	city	latitude	longitude	valid	museum_count	restaurant_count	transportation_count	institution_count	dense	linear
61	San Antonio	29.577101	-98.619790	1	0	4	0	10	5.263879	14.194014
22	Chicago	41.702830	-87.690556	1	0	1	1	1	4.965051	6.145692
34	Houston	29.891301	-95.485590	1	0	1	0	0	3.538155	5.418541

The most suitable location for The Tech Museum is Northwest San Antonio, Texas

