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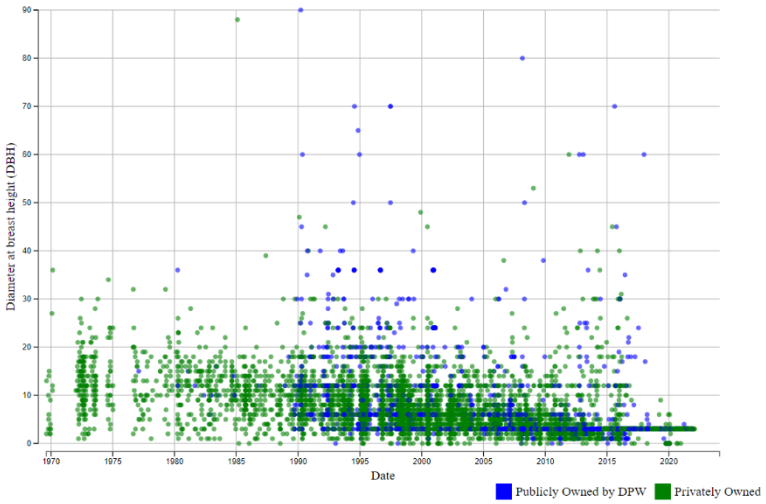
Info 4310: Homework 1 Write-up



This visualization aims to provide insights into how tree size evolves over time and how ownership status, whether publicly or privately taken care of, influences this growth. This analysis can help to understand the impact of different management practices and environmental conditions on tree growth.

The dataset used in this analysis contains information about trees occupying city sidewalks in San Fransico, including their diameter at breast height (DBH) as a proxy for size and growth, planting dates, and caretaker status (public or private). Initial data processing involved filtering out trees with missing planting dates and parsing the dates to create a time series. I did have to remove data points with planted dates that are in the future to maintain the integrity of the visualization. The dataset was then divided based on caretaker status, public vs. private.

I decided a scatterplot was best for this type of analysis as it clearly shows the relationship between tree size (DBH) and time, with each point representing an individual tree. Public and private trees are differentiated by color, with public trees shown in blue and private trees in green. Blue was chosen for public trees to evoke a sense of community ownership, while green is used for private trees to represent their connection to private property settings and profit. Additionally, the use of a time series facilitates the exploration of patterns in tree growth, helping to uncover insights into the long-term changes of urban environments.

From the visualization, we can see that privately taken care of trees have been prominent in San Francisco for much longer than public trees. But shockingly, publicly owned trees seem to be larger in size than privately owned trees. I think this visualization can shed light on the interplay between urban management practices, environmental factors, and tree health, which overall is a proxy for environmental health. This understanding is crucial for informing future urban planning decisions and fostering sustainable management practices to support healthy urban ecosystems.