InfoVisualization HW 1

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The visualization aims to narrate the story of urban forestry growth in San Francisco over several decades, focusing on the distribution of tree plantings from the 1960s through the 2010s. By highlighting the number of trees planted in each decade and representing the variety of caretakers involved, the visualization shows the city's evolving commitment to environmental sustainability and urban greenery. This visualization not only celebrates the progress made in urban forestry but also aims to foster appreciation and awareness of the role of trees in enhancing urban life, contributing to biodiversity, and mitigating environmental issues. The primary data processing involved cleaning and organizing the dataset to ensure accuracy and relevance. This included parsing the PlantDate to accurately filter trees by decade, despite the challenges posed by varying date formats and missing data. Trees with planting dates before 1955 were excluded to focus on a timeframe where data was more consistently available. Additionally, DBH (Diameter at Breast Height) values were used to represent tree sizes, requiring normalization to ensure visual coherence across the dataset. The qCaretaker field was processed to identify unique categories, to differentiate between trees planted by different institutions (police, port, govt) or private.

Visual encodings in this visualization serve as the bridge between data and visual interpretation. The placement of dots on the map corresponds to the geographic location of each tree, effectively using spatial positioning to encode location data. The color of each dot varies by qCaretaker, employing color as a categorical encoding to differentiate between caretakers such as private entities, public departments, or community groups. The size of each dot reflects the tree's DBH (unsure about the units because it was not mentioned anywhere), with larger dots indicating larger trees, thus utilizing size as a quantitative encoding. A separate legend for color helps decode the caretaker categories, and another for size illustrates the range of tree sizes, enhancing the interpretability of these encodings.

The design choices made throughout the visualization process were driven by the goal of clear, effective communication of the story behind the data. The use of a map as the foundational visual element leverages the inherent human ability to understand spatial information, immediately grounding the viewer in the geographic context of San Francisco. The decision to color-code dots by qCaretaker and to vary their size by DBH was made to highlight the diversity and growth of the urban forest, emphasizing not just the quantity but the quality of tree plantings over time. It also shows whether the initiatives were taken by private owners the govt or other institutions (like port and police dept). The faceted map approach, dividing the visualization by decades, facilitates a temporal comparison, inviting viewers to explore trends in urban forestry efforts over time. In addition as a final touch up, I decided to add the total # of trees planted as absolute numbers in a corner of the box to show the audience the quantitative aspect of the growth as well. Together, I believe these choices create an engaging narrative that encourages viewers to appreciate the evolving nature of tree planting in San Francisco.