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Website Link: https://pages.github.khoury.northeastern.edu/tanishidatta/4200-project/index.html
GitHub Project Repository: https://github.khoury.northeastern.edu/tanishidatta/4200-project

Map

We chose this map because it allowed us to showcase all meteor landings on Earth in an easy-to-see manner. This also helped us identify any patterns and locations with anomalies (such as Antarctica not appearing to have any "fell" meteors). This visualization illustrates the global distribution of meteorite discoveries and effectively communicates the shift between pre- and post-NASA era discoveries.

- **Marks:** Circular points
- **Channels:**
    - Position (x and y axis): Coordinates of meteorite discoveries using latitude and longitude
    - Color: Blue for the pre-NASA era, orange for the post-NASA era
    - Size: Number of meteors in a given area

Line Charts

We chose to utilize line charts as most of our insights revolve around determining the difference in meteors before and after the creation of NASA. Line charts allow us to see how meteor findings have changed easily over time. The visualizations reveal patterns in discoveries over time, in how meteors were discovered and where.

Marks: Points connected by lines
Channels:

- Position (x-axis): Time in years from 1940-1980
- Position (y-axis): Quantitative count of meteorites found
- Color: Different colors for each continent
- Dropdown: Allows users to filter by continent

Bar Chart

We chose a bar chart because it effectively communicates the dramatic difference between meteorite discovery periods at a glance. It's ideal for a website's overview section because it immediately conveys the key story: meteorite discoveries exploded after 1958, particularly "found" meteorites.

- Marks: Rectangular bars representing count aggregations

- Channels:
    - Position (x-axis): Categorical variables of fall type and discovery period
    - Position (y-axis): Quantitative measure of meteorite counts
    - Color: Blue for "fell" meteorites and orange for "found" meteorites, creating a clear visual distinction

Density Plot
We chose a density plot to show the distribution of masses of meteorite landings by decade. We plotted it against the decade because it would be interesting to see if the weight of the masses changed over time. We had to log scale the mass so the data would be visually appealing.

- Marks: Area: Area of the contour
- Channels:
    - Position: The position of each decade and mass,
    - Shape: How the distribution is outlawed
    - Color: The density of meteorite landings.

Sunburst
We chose a sunburst chart to show the distribution of masses and amount of meteorites within each meteorite type and classification. A sunburst chart was appropriate because you could see the hierarchical relationship between the meteorite types and their classification. This is also more appropriate than a pie chart because many classifications can be be displayed, and each classification falls under a type. We chose the sunburst over a hierarchical treemap because meteorites tend to be circular, and the sunburst data displays it in a circle. We decided on a colormap that was visually accessible and assigned each meteorite type to a color. We also added a legend so the user can learn the scientific name of each meteorite type since the abbreviation is used in the sunburst. The interactions we added were buttons so the users could change between masses and amounts, hover to see detailed information on the meteorite classification, and click so the user can choose one meteorite type to observe closer.

- **Marks:** Segmented arcs representing hierarchical levels
  Channels:
    - Position**:** Layout indicating hierarchy from type (inner ring) to classification (outer ring)
    - Color**:** Distinct color for each meteorite type
    - Size: Proportional to the total mass or count, depending on selected view
    - Interaction**:** Click, hover, and toggle buttons to explore and filter data