This visualization aims to help management select 10-15% of vendors from 700 candidates.

Summary of Data

There are six visualizations in total.

(1) The "Vendor-HomeState" figure shows the distribution of vendors by their home state. Most vendors are from Maine, making it difficult to distinguish the data with a gradually changing palette. We used a color palette to show the diversity and suggest that Lobster Land Management select vendors with a similar proportion from different states to maintain cultural diversity at the festival.

(2) We have listed the diversity and the average number of complaints by theme on the lower left side. We suggest that the management enroll vendors with all themes but apply different proportions selection for each. Reducing the ratio for themes with high complaints, such as "Fortune Tell," and increasing it to 20-30% with high satisfaction, such as "Maine Tourism Promotion" and "Games of Chance," may be beneficial.

(3) The "Vendor-Passhold" figure shows that 80% of the candidates are not pass-holders. We also tested the impact of Passhold status on the number of complaints and found no clear difference, so we do not recommend using this as a criterion for vendor selection.

(4) The linear regression plot shows that vendor experience (the number of carnivals a vendor has participated in) does not significantly impact customer satisfaction (the number of complaints). Therefore, compared to *complaints*, we thought *carnivals* is not a useful feature for vendor selection for Management.

(5) We plotted the density of three estimated continuous variables. We found that only the estimated hourly volume had a relatively uniform distribution, suggesting it can be used to differentiate vendors in the selection process.

Suggestion for Management

The "vendor detail with filter" dashboard shows detailed information about each vendor with 4 filters listed on the right side, allowing the Lobster Land management to filter out the ideal vendors based on three key features: *theme, complaints, est_hourly_vol.* We suggest that management pay particular attention to these factors since the vendor's theme and previous complaints directly relate to the customer experience. Visitor volume creates a bustling scene that encourages them to participate. This can have a nice propaganda effect and help promote the event to others, even if it does not necessarily relate to purchase and no profit sharing with Lobster Land Management. The variables (*est_hourly_gross, est_energy*) that were temporarily removed can be added back by applying the "Measure" filter.

Limitation

The limitations involve two aspects: (1) our dashboard's inability to directly select out ideal vendors for management since we couldn't add a frame to show the dynamic count of records after applying a filter or selection; (2) the dataset's unclarity about the relationship between some features and their impact on Lobster Land. Take *est_energy,* for example, to explain the unclarity limitation. It's unclear whether Lobster Land provides the vendors' energy or if they bring their own electric generators, which could affect cost management.