# **APPENDIX**

Five Design Sheet 1

Chart, line chart

Description automatically generatedBackground pattern

Description automatically generatedChart, scatter chart

Description automatically generatedChart, pie chart

Description automatically generatedA picture containing outdoor object, pinwheel

Description automatically generatedChart, radar chart

Description automatically generatedChart, radar chart

Description automatically generatedChart, scatter chart

Description automatically generatedBackground pattern

Description automatically generatedChart, line chart

Description automatically generatedChart, radar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedA picture containing outdoor object, pinwheel

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, line chart

Description automatically generatedMap

Description automatically generatedA picture containing outdoor object, pinwheel

Description automatically generatedChart

Description automatically generatedMap

Description automatically generatedMap

Description automatically generatedMap

Description automatically generatedMap

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, line chart

Description automatically generatedMap

Description automatically generatedChart, box and whisker chart

Description automatically generatedChart, pie chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, box and whisker chart

Description automatically generatedBackground pattern

Description automatically generatedChart, bar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, treemap chart

Description automatically generatedChart, scatter chart

Description automatically generatedChart, pie chart

Description automatically generatedChart

Description automatically generatedChart, treemap chart

Description automatically generatedMap

Description automatically generatedChart, line chart

Description automatically generatedChart, radar chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, diagram, box and whisker chart

Description automatically generated

**3. Categorize**

**2. Filter**

**1. Ideas**

**4. Combine and Refine**

**5. Question**

a. How does the number of animals found in each part of Austin vary from year to year in terms of the different types of animals?

b. What attributes of animals result in a higher likelihood of being euthanized based on their type, age, sex?

c. According to the average duration of stay, what characteristics of different types of animals are more attractive for people to adopt them based on their age, sex, color?

Five Design Sheet 2

Chart, bar chart

Description automatically generatedChart, pie chart

Description automatically generatedChart, bar chart

Description automatically generatedChart, line chart

Description automatically generatedMap

Description automatically generatedChart, radar chart

Description automatically generatedMap

Description automatically generatedTable

Description automatically generated

Page 1: choose one type of animal from the button, then click any part of the map, a Line Chart will show how the number of that type of animal found by the shelter varies from year to year.

Page 2: choose one option from type, age and sex, the Bar Chart and Pie Chart will show the number and proportion of each attribution of animal been euthanized.

Page 3: choose one type of animal from the button, then choose one option from age, sex and color, the Bar Chart and Radar Chart will show the average duration of stay of each characteristic.

**Pros:**

The Line Chat clearly shows the trend in which data varies from year to year.

The Radar Chart supplements the differences between data of different types of animals.

Line chart and bar chart are easy to read

**Cons:**

Circles on the bubble map only shows the total number, but cannot show the change of data with different years

**Layout**

**Discussion**

**Operations**

Focus

Visualization Project

Chenzhi Liao

Sep 13 2021

Sheet 2

Option 1

Five Design Sheet 3

Chart, bar chart

Description automatically generatedChart, line chart

Description automatically generatedBackground pattern

Description automatically generatedChart, bar chart

Description automatically generatedMap

Description automatically generatedChart, bar chart

Description automatically generatedTable

Description automatically generated

Layout

Page 1: choose one type of animal from the button, then click any part of the map, a Bar Chart will show how the number of that type of animal found by the shelter varies from year to year.

Page 2: choose one option from type, age and sex, the Stacked Bar Chart and Sankey Chart will show the number and proportion of each attribution of animal been euthanized.

Page 3: choose one type of animal from the button, then choose one option from age, sex and color, the Bar Chart and Line Chart will show the average duration of stay of each characteristic.

Discussion

**Pros:**

The Stacked Bar Chart and Sankey Chart can more clearly show how all the outcome condition of animals distribute into different attributions, while Option 1 only show the number and proportion of each attribution of animal been euthanized

**Cons:**

The Bar Chart in Page 1 cannot show the trend that how the data varies from year to year

Operations

Focus

Visualization Project

Chenzhi Liao

Sep 13 2021

Sheet 3

Option 2

Five Design Sheet 4

Chart, radar chart

Description automatically generatedChart, scatter chart

Description automatically generatedA picture containing outdoor object, pinwheel

Description automatically generatedChart, bar chart

Description automatically generatedChart, line chart

Description automatically generatedMap

Description automatically generatedTable

Description automatically generated

Page 1: choose one type of animal from the button, then click any part of the map, a Line Chart will show how the number of that type of animal found by the shelter varies from year to year. Use slider bar to filter year to see the change of color of each part on the map.

Page 2: choose one option from type, age and sex, the Bar chart and Nightingale Rose Chart will show the number and proportion of each attribution of animal been euthanized.

Page 3: choose one type of animal from the button, then choose one option from age, sex and color, the Radar Chart and Scatter Plot will show the average duration of stay of each characteristic.

Focus

Layout

**Pros:**

Using slider bar to filter year which can show the change of color of each part of the map can show better visual effect than only with the Lie Chart.

**Cons:**

Age only has three attributes which is too little, so it would be better to use Pie Chart rather than Nightingale Rose Chart.

Discussion

Operations

Visualization Project

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Sep 13 2021

Sheet 4

Option 3

Five Design Sheet 5

Chart, bar chart

Description automatically generatedChart, radar chart

Description automatically generatedChart, bar chart

Description automatically generatedBackground pattern

Description automatically generatedMap

Description automatically generatedChart, line chart

Description automatically generatedTable

Description automatically generated

Page 1: choose one type of animal from the button, then click any part of the map, a Line Chart will show how the number of that type of animal found by the shelter varies from year to year.

Use slider bar to filter year to see the change of color of each part on the map.

Page 2: choose one option from type, age and sex, the Stacked Bar Chart and Sankey Chart will show the number and proportion of each attribution of animal been euthanized.

Page 3: choose one type of animal from the button, then choose one option from age, sex and color, the Bar Chart and Radar Chart will show the average duration of stay of each characteristic.

Focus

Layout

Detail

Operations

Visualization Project

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Sep 13 2021

Sheet 5

Final Design

Take 2 weeks in total: 0.5 week for modifying the five design sheets after getting feedback, 1 week for completing the visualization, 0.5 week for writing the report and review.

Audience: animal shelters

Tool: D3