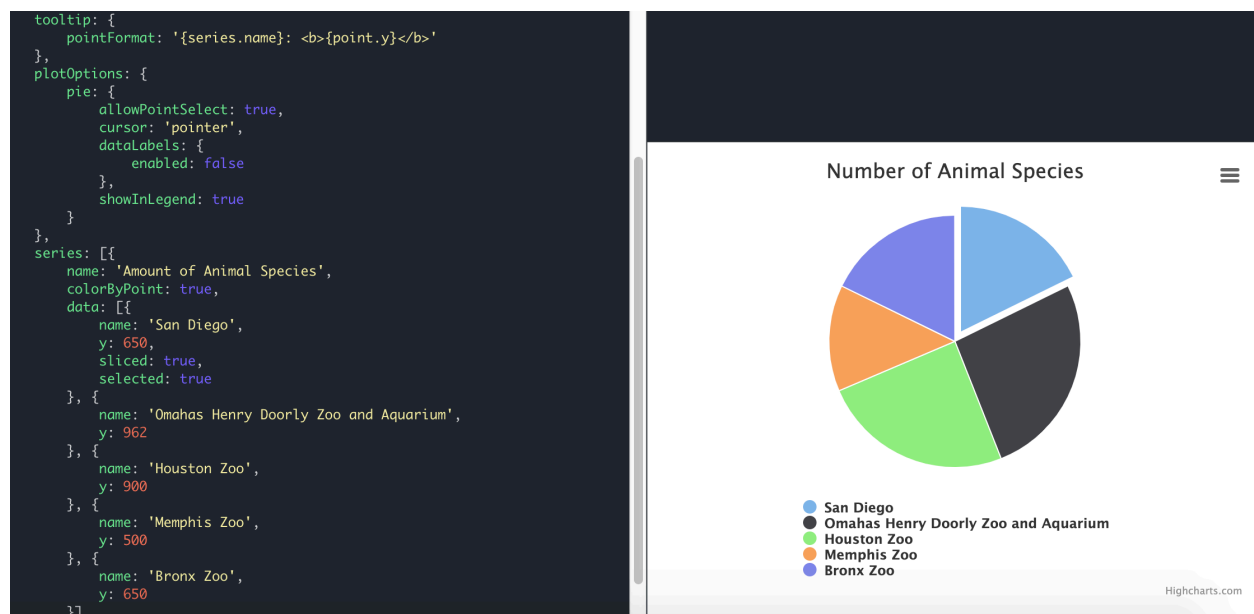


Rachel Kehoe
LA 558: Final Project Report

My final project focuses on what American zoos offer in order to achieve high ratings and be successful in both animal species and habitats, and visitor expectations. It is directly connected to the research I have been conducting on animal welfare and visitor happiness throughout my graduate career in landscape architecture in zoological design.

I researched the five top-rated American zoos in retrospect to animal species and visitor expectations. The zoos are based on ratings and locations in each region in the USA (West, Midwest, Southwest, Southeast, and Northeast). Individual zoo sites include information from the top zoos in the 5 regions of the USA: San Diego Zoo, Omaha's Henry Doorly Zoo and Aquarium, Houston Zoo, Memphis Zoo, and Bronx Zoo.

My original plan was to study which type of animal species are in the five top-rated zoos, what the population of the highest viewed animals are, and what types of animal habitats are most viewed and successful. With the limited zoo data, I had to make a few changes. I decided to study the number of animal species at each zoo location by making a chart in Highcharts. I changed the tooltip to show an amount instead of percentage and added in the number of animal species in the data.



The study also relates to visitor happiness outcomes. What do visitors want or expect to achieve by experiencing zoos? To achieve this outcome, I have created a map with regional overlays along with topographic information and amounts of population in the zoo city locations. I have also created a chart to understand what is important to zoo visitors to experience a happy adventure and which of the five zoos have those features.

```
//create the map
var map = L.map('map', {
  center: new L.LatLng(42.0908, -93.6208),
  zoom: 4,
  layers: [OSM, Stamen_TonerLines]
});

//----- individual city markers
var sandiego = L.marker([32.736111,
-117.151389]).bindPopup('San Diego Zoo').addTo(map),
var omaha = L.marker([41.224703,
-95.928701]).bindPopup('Omaha's Henry Doorly Zoo and
Aquarium').addTo(map),
var houston = L.marker([29.716132,
-95.390569]).bindPopup('Houston Zoo').addTo(map),
var memphis = L.marker([35.15, -89.9943]).bindPopup('Memphis
Zoo').addTo(map),
var bronx = L.marker([40.850581, -73.87538]).bindPopup('Bronx
Zoo').addTo(map);
```

I have also created a chart to understand what is important to zoo visitors to experience a happy adventure and which of the five zoos have those features.

```
Highcharts.chart('container', {
  chart: {
    type: 'bar'
  },
  title: {
    text: 'Visitor Expectations at Zoos'
  },
  xAxis: {
    categories: ['Animal Encounters', 'Behind the Scenes', 'Education',
'Playground/Splash Pad', 'Restaurant']
  },
  yAxis: {
    min: 0,
    title: {
      text: 'Availability of Activities'
    }
  }
});
```