Visualisation Project-1 Report

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Dataset: I have used World Wushu Championships 2017 data to visualize the features. The dataset contains total 17 columns which are the features of each player like Name, Country, Overall Score, Rank, A_Score,B_Score,C_Score, Time, PlaceCat, Region, Event, Gender, B_Score_Cat, A_Ded_Cnt,Nandu_Miss, Nandu_Total, Nandu_Completed about the game. Among these 17 columns, 7 are categorical data and rest are numerical data.

Bar Chart - A bar chart has been plotted for every categorical variable which shows the value count of each bar on the y-axis and the name of different attributes of categories along x-axis. The tooltip feature has been given to show the value of each bar on mouseover and also each bar is highlighted on mouseover. Also I have used a color shading scale which shows the lighter color for lesser numbered valued bars and darker for higher number valued bars.

```
svg.selectAll(".bar")
       .data(dataArray)
       .enter().append("rect")
       .style("fill", function(d) { return colorScale(d.Value) })
       .attr("x", function(d) { return x(d.colName); })
       .attr("width", x.rangeBand())
       .attr("y", function(d) { return y(d.Value); })
       .attr("height", function(d) {return height - y(d.Value); })

       .on("mouseover", function(d){
           d3.select(this).style("fill", "red")
           .attr("x", function(d) { return x(d.colName); })
           .attr("width", x.rangeBand()+5)
           .attr("y", function(d) { return y(d.Value)-5; })
           .attr("height", function(d) {return (height - y(d.Value)+5); })
           tip.html( "<strong> <span style='color:red'>" + d.Value +
"</span></strong>");
           tip.show();
           })

       .on("mouseout", function(d){
           d3.select(this).style("fill", function(d) { return colorScale(d.Value) })
           .attr("x", function(d) { return x(d.colName); })
           .attr("width", x.rangeBand())
```

```
            .attr("y", function(d) { return y(d.Value); })
            .attr("height", function(d) {return (height - y(d.Value)); })
            tip.hide();
            });
```

Histogram - A histogram has been plotted for every numerical variable which shows the value count of each bin on the y-axis and the bins along x-axis. The tooltip feature has been given to show the value of each bin on mouseover and also each bin is highlighted on mouseover. Also I have used a color shading scale which shows the lighter color for lesser numbered valued bins and darker for higher number valued bins.

```
bar.append("rect")
                        .attr("x", 1)
                        .attr("width", (x(data[0].dx) - x(0))- padding)
                        .attr("height", function(d) { return height - y(d.y); })
                        .attr("fill", function(d) { return colorScale(d.y) })
                        .attr("transform", function(d) { return "translate(" + x(d.x) +
"," + y(d.y) + ")"; })

                        .on("mouseover", function(d){
                         d3.select(this)
                        .attr("width", (x(data[0].dx) - x(0)) -padding +5)
                        .attr("height",function(d) { return height - y(d.y)+5; })
                        .attr("transform", function(d) { return "translate(" + x(d.x) +
"," + (y(d.y)-5) + ")"; })
                        .attr("fill", "red");
                        tip.html( "<strong> <span style='color:red'>" +
formatCount(d.y) + "</span></strong>");
                            tip.show();
                    })

                        .on("mouseout", function(d){
                            d3.select(this)
                            .attr(0)
                            .attr("width", (x(data[0].dx) - x(0)) - padding)
                            .attr("height",function(d) { return height - y(d.y); })
                            .attr("transform", function(d) { return "translate(" +
x(d.x) + "," + (y(d.y)) + ")"; })
                            .attr("fill", function(d) { return colorScale(d.y) });
                            tip.hide();
```

```
                        });
```

Change Bin Size -I have used a slider on which mouse (with left mouse button down) move left (right) should decrease (increase) bin width/size (for numerical variables only)

```
function changeBinSize(){
   var val = slider.value;
   return val;
   };
var data = d3.layout.histogram()
           .bins(x.ticks(changeBinSize()))
           (dataMap);
slider.oninput = function() {
   changeBinSize();
   plotHistogram();
 }
```

Youtube video link: https://youtu.be/4rHe8nq9_FY