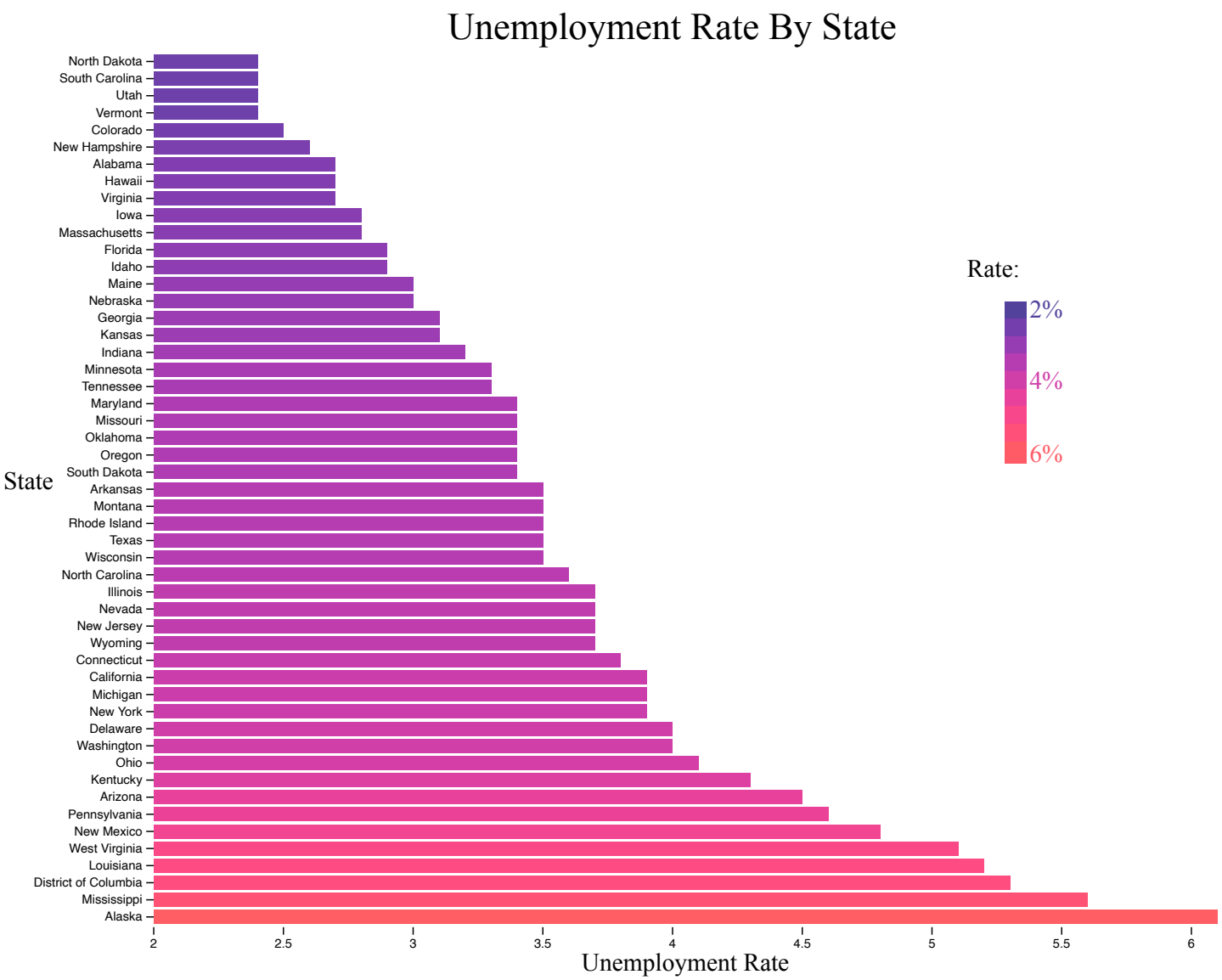
Kora Hughes, Exercise 3: Graphical Encoding

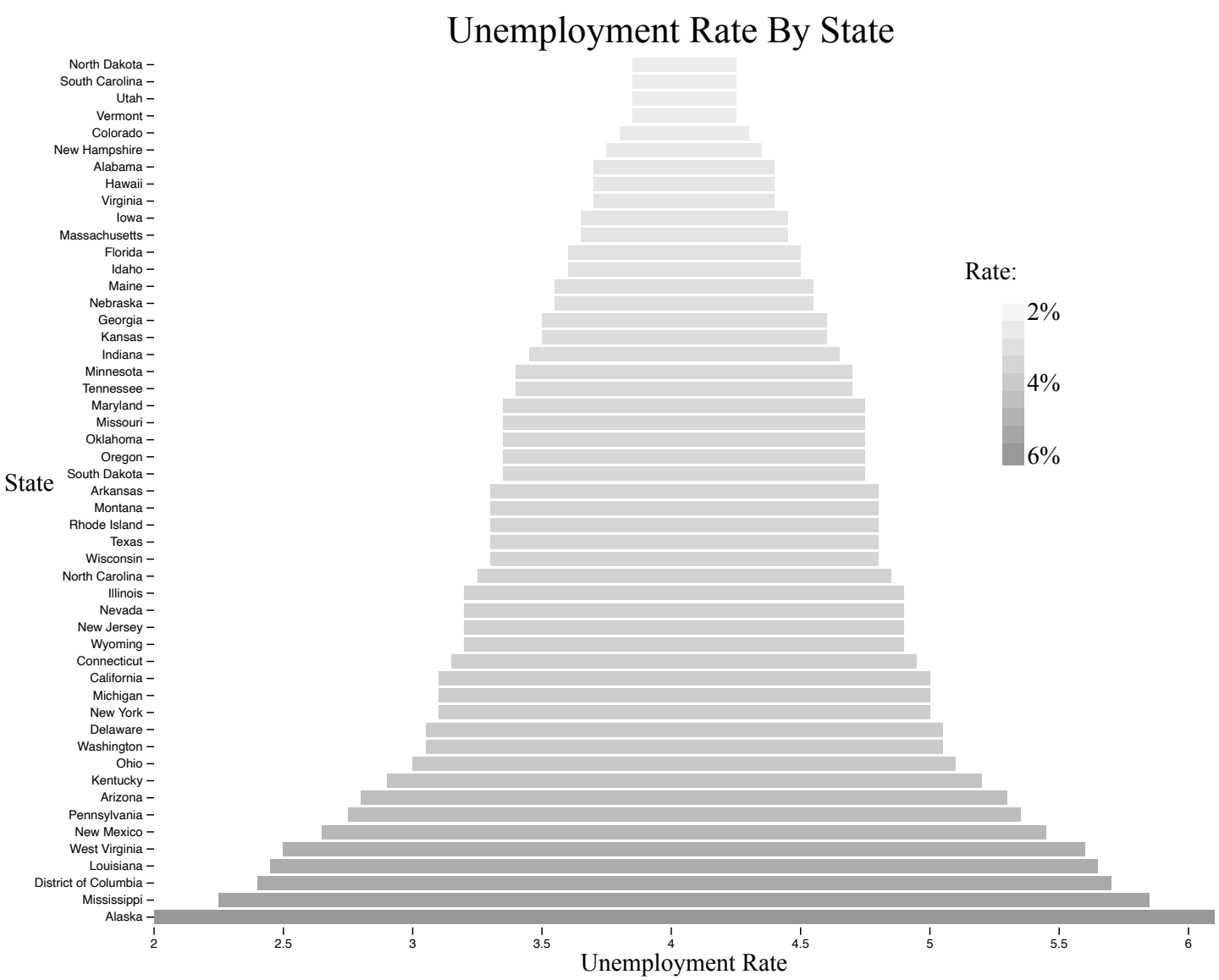
Graph 1 - Marks(bars), Channels(size/width, hue): I think this is a good way to visualize the data. Bar graphs are optimal for categorical x quantitative data which is what we are seeing here. Ordered categories with the added hue visial aid is effective at both comparing near-by states and evaluating the states with the overall highest-lowest employment. Expressiveness is great although the buckets of data that seem to be equivalent even though its likely just due to the accuracy of the data leaves a little to be desired. Also it is hard to guage specfiic values. Effectiveness is good even if hue is more suited to categorical attributes.

Graph 2 - Marks(bars), Channels(size/width, position, brightness/luminance): Slightly worse visualization that the 1st but still readable. Lower values blend kind of blend with background and are harder to see, reducing effectiveness. Comparisons and ranking can still be done, though smaller rankings can be difficult to compare due to distance from the axis labels. Also the combination of length and position is can be confusing. Expressiveness is passible, effectivness is not optimal but could be worse.

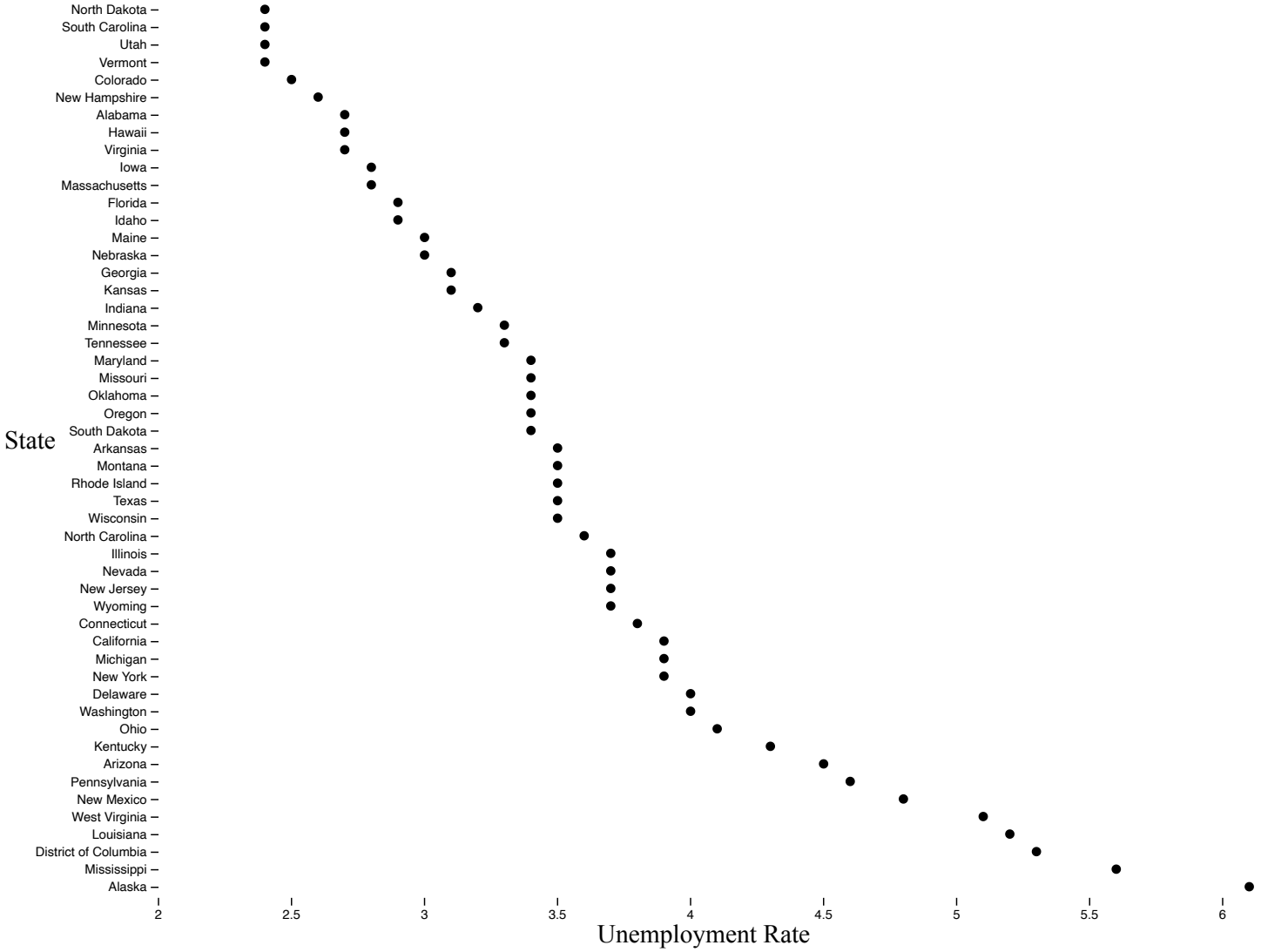
Graph 3 - Marks(square-points), Channels(position): This visualization isn't great but could be worse. The position of the points is intuitive and somewhat effective though is not as expressive as it could be with an aligned length comparison. The distance of the marks from the categorical label makes it difficult to tell which point is which in the case of the states with larger unemployment rates which reduces effectiveness.

Graph 4 - Marks(area), Channels(position, color-intensity): This visualization is rather clear so long as you have an intuitive understanding of the US map. Unemployement rate is pretty difficult to tell with smaller states/territories like Hawaii due to the area being too small. Otherwise this visualization is pretty readable. The use of area marks makes effectiveness high but the use of saturation slightly hinders expressiveness as the comparison of rates between states not adjacent to each other becomes inaccurate and difficult.


Unemployment Rate By State
North Dakota
South Carolina
Utah
Vermont
Colorado
New Hampshire
Alabama
Hawaii
Virginia
Iowa
Massachusetts
Florida
Idaho
Maine
Nebraska
Georgia
Kansas
Indiana
Minnesota
Tennessee
Maryland
Missouri
Oklahoma
Oregon
South Dakota
Arkansas
Montana
Rhode Island
Texas
Wisconsin
North Carolina
Illinois
Nevada
New Jersey
Wyoming
Connecticut
California
Michigan
New York
Delaware
Washington
Ohio
Kentucky
Arizona
Pennsylvania
New Mexico
West Virginia
Louisiana
District of Columbia
Mississippi
Alaska
State
2
2.5
3
3.5
4
4.5
5
5.5
6
Unemployment Rate
Rate:
2%
4%
6%


Unemployment Rate By State
North Dakota
South Carolina
Utah
Vermont
Colorado
New Hampshire
Alabama
Hawaii
Virginia
Iowa
Massachusetts
Florida
Idaho
Maine
Nebraska
Georgia
Kansas
Indiana
Minnesota
Tennessee
Maryland
Missouri
Oklahoma
Oregon
South Dakota
Arkansas
Montana
Rhode Island
Texas
Wisconsin
North Carolina
Illinois
Nevada
New Jersey
Wyoming
Connecticut
California
Michigan
New York
Delaware
Washington
Ohio
Kentucky
Arizona
Pennsylvania
New Mexico
West Virginia
Louisiana
District of Columbia
Mississippi
Alaska
State
Rate:
2%
4%
6%
2
2.5
3
3.5
4
4.5
5
5.5
6
Unemployment Rate

Unemployment Rate By State



Unemployment Rate By State