Heatmaps: A Multivariate Visualization Method

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Why use heatmaps

• Matrix visualized with colour gradients
• Visually recognize patterns in data
  • Condense multiple response and predictor variables into one figure
  • Highlight similarities and/or differences between predictor and response variables
History of heatmaps

Creating heatmaps in R

1. Create data matrix.
2. Scale the data.
3. Create distance values – dist().
   - euclidean, maximum, manhattan, canberra, binary or minkowski
4. Cluster the values by creating a dendrogram – hclust().
   - ward.D, ward.D2, single, complete, average, mcquitty, median, centroid

- Heatmap -> heatmap.2
- Aheatmap -> pheatmap
- Heatmap
- Heatmap3
- Heatmaps in ggplot2 (not as good)
References