

Group beats Trend!? A framework for testing feature hierarchy in statistical graphics

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Abstract

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1 Introduction and background

Intro to lineups (Buja et al., 2009; Majumder et al., 2013; Wickham et al., 2010; Hofmann et al., 2012)

2 Design Choices

Perceptual kernels (Çağatay Demiralp et al., 2014)

3 Generating Model

References

Buja, A., Cook, D., Hofmann, H., Lawrence, M., Lee, E. K., Swayne, D. F., and Wickham, H. (2009), “Statistical inference for exploratory data analysis and model diagnostics,” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 367, 4361–4383.

Çağatay Demiralp, Bernstein, M., and Heer, J. (2014), “Learning Perceptual Kernels for Visualization Design,” *IEEE Trans. Visualization & Comp. Graphics (Proc. InfoVis)*.

Hofmann, H., Follett, L., Majumder, M., and Cook, D. (2012), “Graphical Tests for Power Comparison of Competing Designs,” *Visualization and Computer Graphics, IEEE Transactions on*, 18, 2441–2448.

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Majumder, M., Hofmann, H., and Cook, D. (2013), “Validation of Visual Statistical Inference, Applied to Linear Models,” *Journal of the American Statistical Association*, 108, 942–956.

Wickham, H., Cook, D., Hofmann, H., and Buja, A. (2010), “Graphical inference for infovis,” *IEEE Transactions on Visualization and Computer Graphics (Proc. InfoVis '10)*, 16, 973–979, 26% acceptance rate. Best paper award.