

# visual-encoding

November 11, 2020

## 1 Review of *Visual Encoding*

This work concerns empirical verification of principles of data visualization. It builds on previous work in the field (Cleveland et al.) which has proposed a number of principles for efficient information retrieval from quantitative visualizations. For example, when coding magnitude in a visualization, it is widely believed that differences in length are easier to discern than differences in area, thus motivating bar charts vs. pie charts.

Pros: This work address an important and relevant question. The results are potentially of interest to the data visualization community. The challenges, e.g. lack of hypothesis test, preventing cheating, and screen resolution, seem appropriately described. Importantly the success of the study depends on their adequate resolution. I am hopeful the authors will do so. The analysis seems sound, though I have not checked it in detail. Last, the timeline seems reasonable.

Cons: It would have been helpful to show some of the example graphs you are planning, even if they are at present preliminary.

Other comments: Lastly, consider including as reference “The Visual Display of Quantitative Information” by John Tukey.