

Optimizing Color Assignment for Perception of Class Separability in Multiclass Scatterplots

– Supplementary Material –

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Michael Sedlmair, Chi-Wing Fu, Oliver Deussen and Baoquan Chen




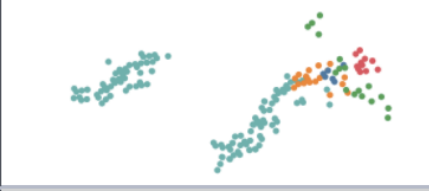
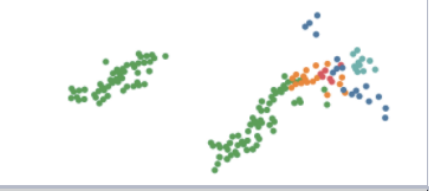
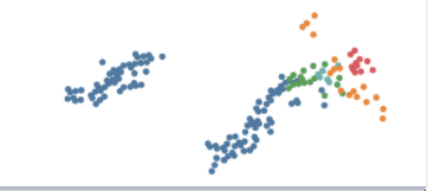
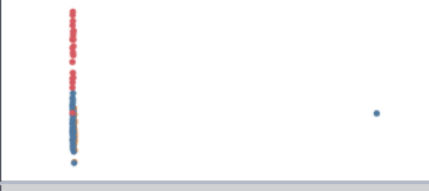
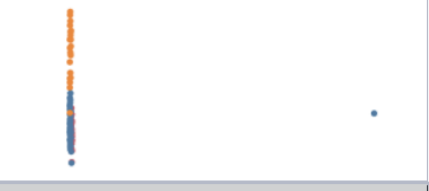
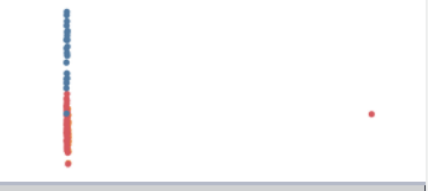






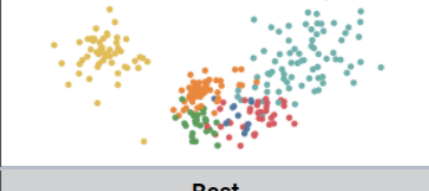
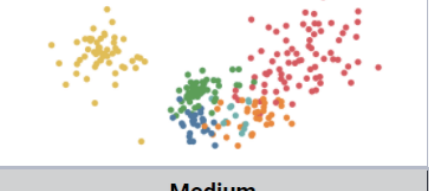
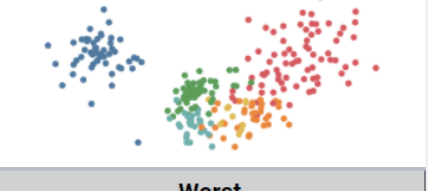
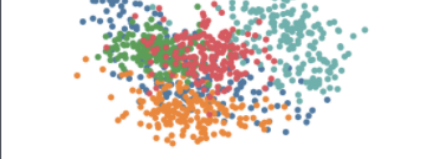

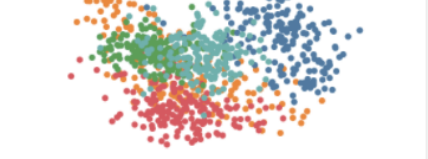



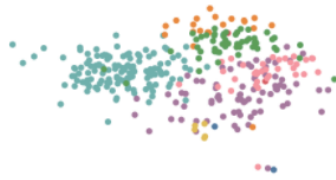
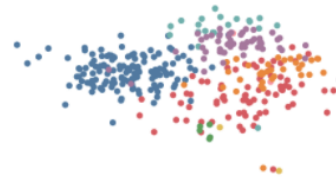








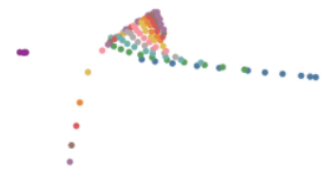
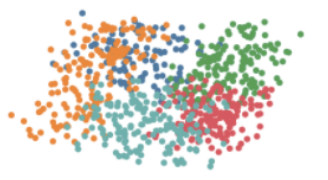
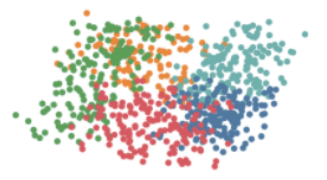
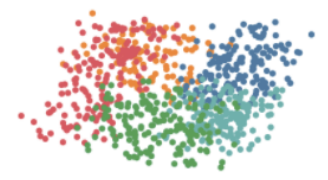
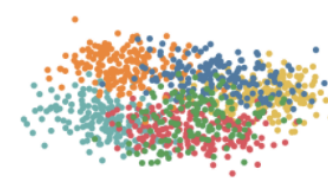
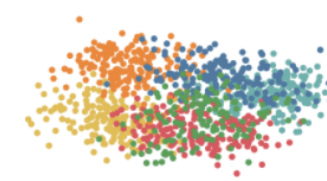
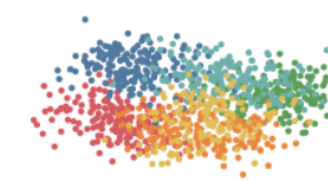
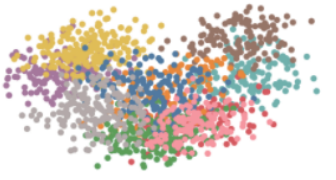
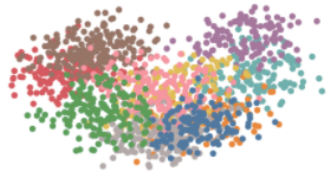
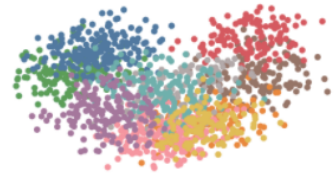
This supplemental material file provides additional experimental results for our submitted paper titled “Perception-Driven Color Assignment for Multiclass Scatterplots.” We provide the detailed results shown in Figure 8 in our paper. The results include the scatterplots with best, medium, and worst class visibility [2] of all the 27 datasets from [1].













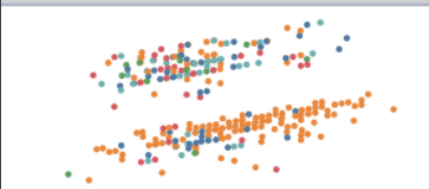
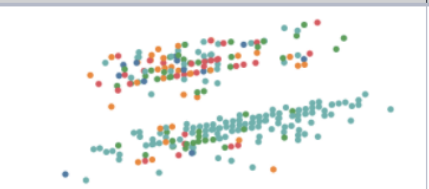
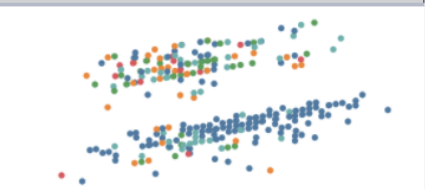
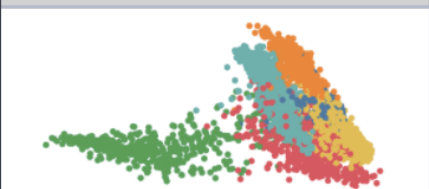
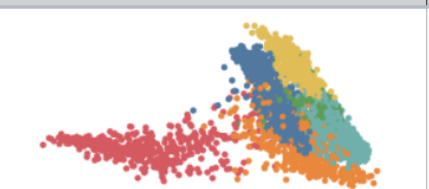
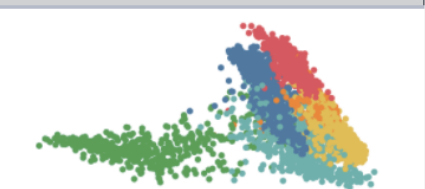
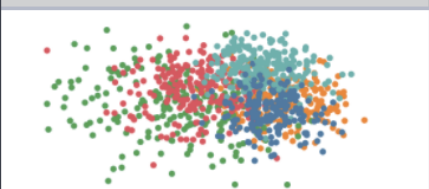
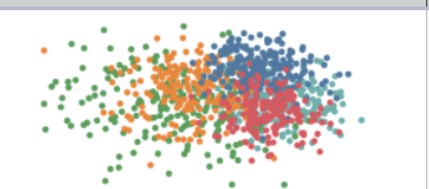

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 - Y. Wang and X. Chen are joint first authors.

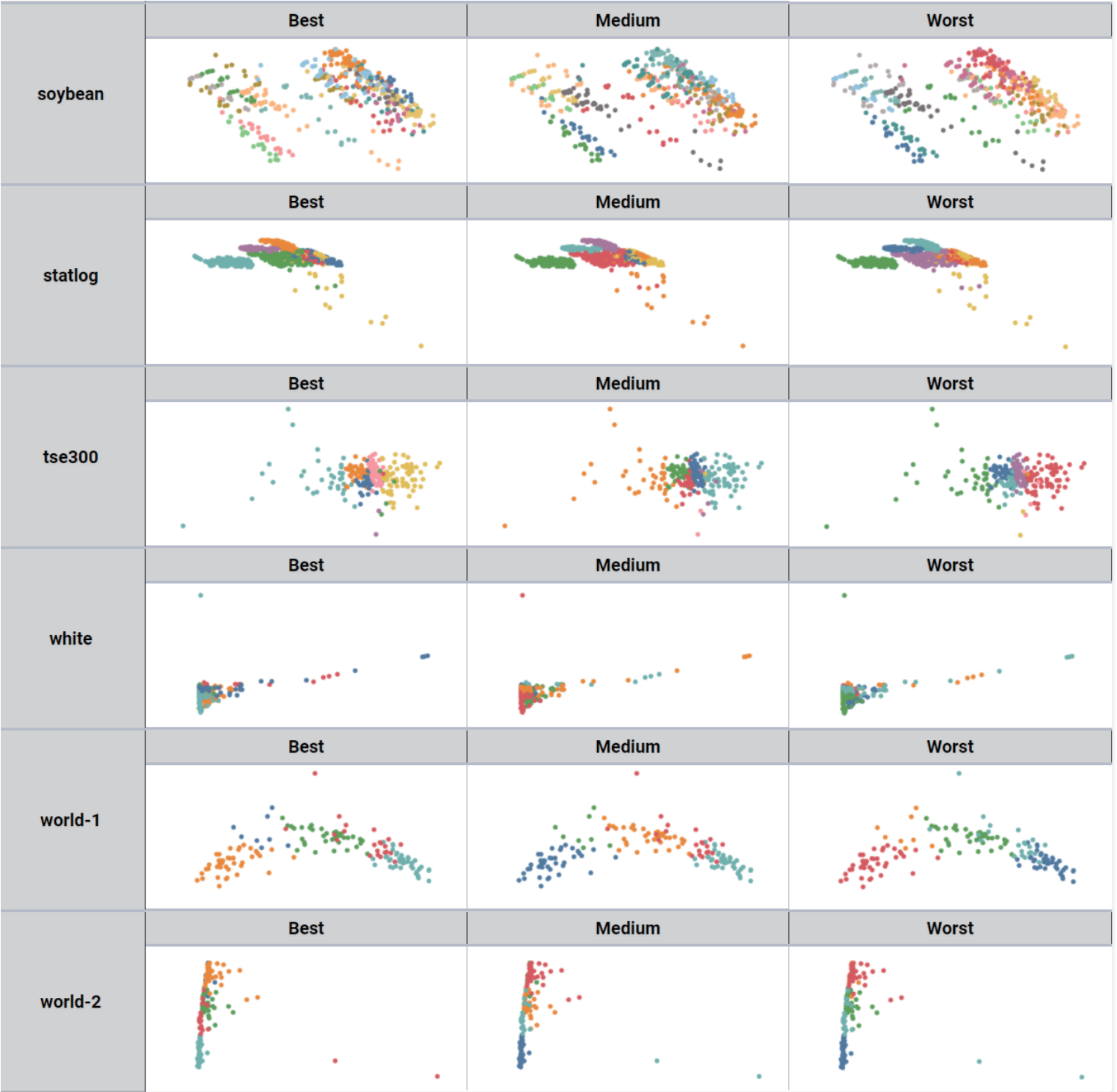
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RESULTS OF BEST, MEDIUM, AND WORST CLASS VISIBILITY

| | Best | Medium | Worst |
|-------------|---|--|---|
| balance |  |  |  |
| bbdm13 |  |  |  |
| boston |  |  |  |
| cereal |  |  |  |
| connection |  |  |  |
| dermatology |  |  |  |
| digits5_8 |  |  |  |

| | | | |
|---------------|---|--|---|
| ecoliproteins | Best | Medium | Worst |
| |  |  |  |
| efashion | Best | Medium | Worst |
| |  |  |  |
| fisheries-1 | Best | Medium | Worst |
| |  |  |  |
| fisheries-2 | Best | Medium | Worst |
| |  |  |  |
| interleav-1 | Best | Medium | Worst |
| |  |  |  |
| interleav-2 | Best | Medium | Worst |
| |  |  |  |
| interleav-3 | Best | Medium | Worst |
| |  |  |  |

| | | | |
|-----------------|---|--|---|
| italianwines | Best | Medium | Worst |
| |  |  |  |
| javier | Best | Medium | Worst |
| |  |  |  |
| movement_libras | Best | Medium | Worst |
| |  |  |  |
| n100 | Best | Medium | Worst |
| |  |  |  |
| processed | Best | Medium | Worst |
| |  |  |  |
| satimage | Best | Medium | Worst |
| |  |  |  |
| scene | Best | Medium | Worst |
| |  |  |  |



REFERENCES

- [1] C. Blake and C. J. Merz. UCI repository of machine learning databases. <https://archive.ics.uci.edu/ml/datasets.html>, 1998.
- [2] S. Lee, M. Sips, and H.-P. Seidel. Perceptually driven visibility optimization for categorical data visualization. *IEEE Trans. Vis. & Comp. Graphics*, 19(10):1746–1757, 2013.