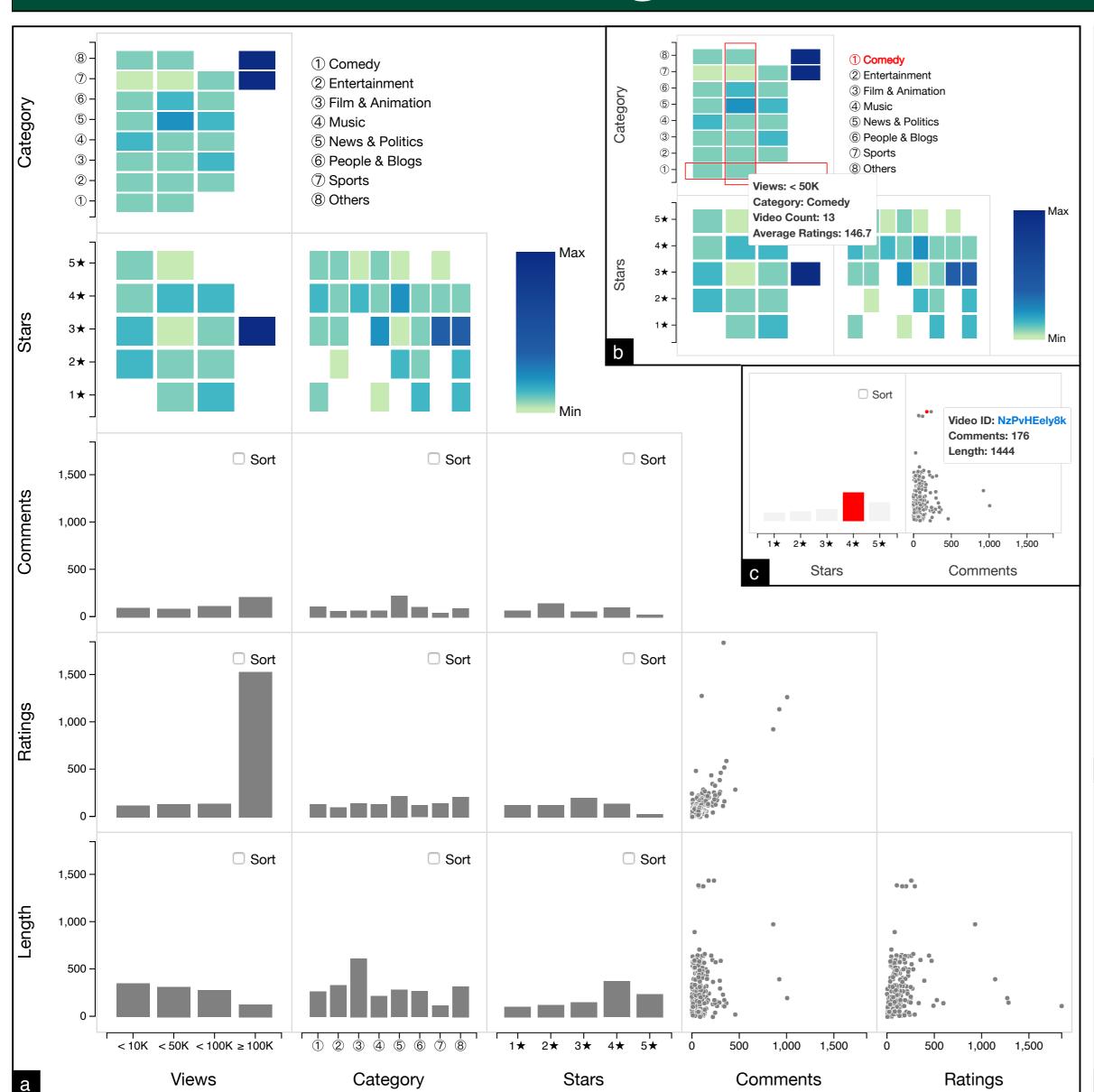
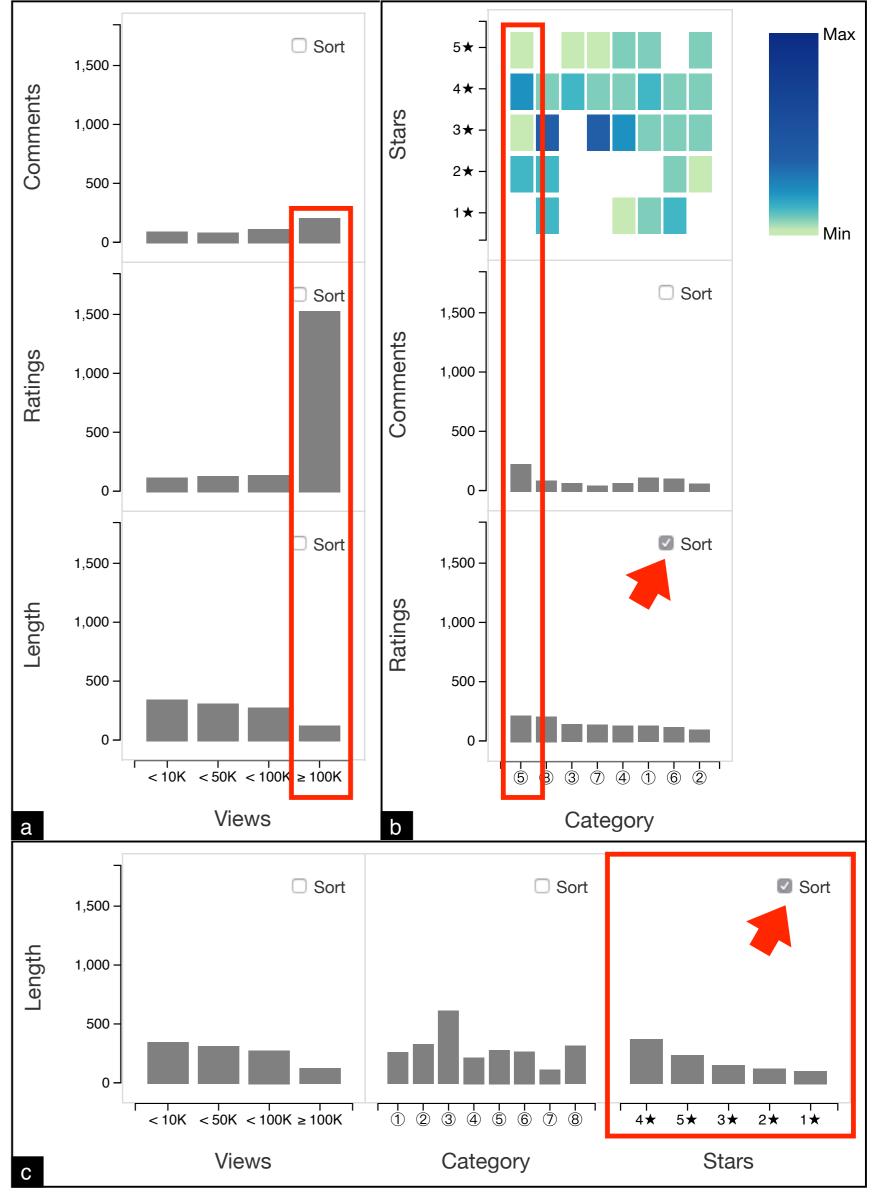
INTERACTIVE EXPLORATION OF MULTIDIMENSIONAL YOUTUBE DATA USING THE GPLOM TECHNIQUE



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Visit git.io/vwDqw for a live demo.





TECHNIQUE

- Used the GPLOM technique by Im et al. [3].
- Uses a scatterplot for two quantitative attributes.
- Uses a bar chart for a categorical and quantitative attribute.
- Uses a heatpmap for two categorical attributes

DATASET

- Used 202 videos from "Statistics and Social Network of YouTube Videos" project [2].
- Combined categories, like "Howto & DIY" and "Gadgets & Games", into an "Other" category.
- Binned total views into less than 10k, 10k to 50k, 50k to 100k, and 100k+ views.
- Binned average rating into \star , \star , \star \star \star , etc.

IMPLEMENTATION (LEFT PANEL)

- Used D3.js [1] and 27 linked SVGs total.
- Example of focus + context [4] on heatmap. The row, column, and legend entry are highlighted.
- Example of coordinated views [5] between barchart and scatterplot.

FINDINGS (RIGHT PANEL)

- Total comments and ratings increase as the total view increases, but ratings increased more drastically for videos over 100k views.
- b) "News and Politics" has the most comments and ratings, but not the most $5 \bigstar$ ratings.
- As the length increases, the ratings tend to be higher but total views tends to be lower.

[1] M. Bostock, V. Ogievetsky, J. Heer, "D3: Data Driven Documents," in IEEE Transactions on Visualization & Computer Graphics, 17(12):2301–2309, 2011. [2] X. Cheng, C. Dale, J. Liu, "Statistics & Social Network of YouTube Videos," in Proceedings of the 16th International Workshop on Quality of Service, p229–238, 2008. See: http://netsg.cs.sfu.ca/youtubedata/[3] J.-F. Im, M. McGuffin, R. Leung. "GPLOM: The Generalized Plot Matrix for Visualizing Multidimensional Multivariate Data," IEEE Transactions on Visualization & Computer Graphics, 19(12):2606–2614, 2013. [4] J. Lamping, R. Rao, P. Pirolli, "A Focus +Context Technique Based on Hyperbolic Geometry for Visualizing Large Hierarchies," in Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, p401–408, 1995. [5] J. Roberts, "State of the Art: Coordinated & Multiple Views in Exploratory Visualization," in Proceedings of the 5th International Conference on Coordinated & Multiple Views in Exploratory Visualization, p61–71, 2007.