Visualization: final project proposal
Seren Lowy

1. Title or topic that you are going to work on

Curve Boxplot: Generalization of Boxplot for Ensembles of Curves

2. A brief description of the problem.

- What visualization problem(s) do you try to address?

Readable depiction of ensemble datasets. Ensemble datasets, meant to represent uncertainty in complex simulations, look chaotic when plotted as streamlines or plume charts, because many differing paths cross each other.

- Any tentative solution?

According to the paper above, we will extend the boxplot technique, traditionally applied with point data, to an adapted use with line and curve data (such as streamlines) in an ensemble dataset.

- What platform, library, and programming language are you planning to use?

We will use Python and possibly R languages to code, and VTK library to visualize.

3. Team members: who will be on your team and their roles (who will do what?)

Seren Lowy (only team member): project design, software development, dataset collection, report

4. A tentative strategy to address the problem

- Techniques you learned from the class or reported in some papers.
- List of references

Mirzargar, M., Whitaker, R. T., and Kirby, R. M. (2014). "Curve Boxplot: Generalization of Boxplot for Ensembles of Curves" https://users.cs.utah.edu/~kirby/Publications/Kirby-91.pdf

5. A tentative timeline-- what are the individual milestones of your project

M1 (weeks 1-2): collect and prepare ensemble data, visualize in baseline (traditional) format

M2 (weeks 3-4): develop curve boxplot rendering technique in code

M3 (week 5): larger-scale evaluation of curve boxplot visualizations,

Final (week 6): reporting, presentation