

Color Your Data

15-112 Final Project Proposal

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1 Goal

For a statistician, it is usually not enough to only conduct good data analysis – visualizing the results is also crucial. Especially when people want to give a presentation and show some figures that compares results from different scenarios, it is extremely important to choose a set of colors that can be easily distinguished from each other, and are also colorblind safe.

My goal is to build a small app that helps people choosing color schemes to display their data. The user can input the number of classes of their data, and the app will give out several built in color schemes that have been carefully selected beforehand. Users can also design their own favorite color schemes. The advantage of my app is that user can immediately see the result plot using current scheme, so that they can decide whether to use it or not. Users can also import their data, and export their favorite schemes to txt files.

2 A more detailed description of implementation

The main part of the app will be built in Tkinter. The several main functionals are as follows:

1. A basic background canvas; displaying different plots and color schemes: in Tkinter
2. Three radio buttons which let users to decide whether they want to view the colors in a bar plot, a pie chart, or a trend line plot.
3. A combo box that let user to choose the number of colors.
4. A check button which let users to decide whether they want colorblind-safe or not.
5. Display a color wheel and allow user to click on it to select colors.
6. Several more buttons that allow user to add, delete, save colors.