Our project is focused on exploring human categorical perception with a specific concentration on color. We will offer a short quiz that will assess the user's specific color categorization and record the data in a large database for researchers to access. In addition, our website will be able to make some basic calculations and graphs based on the data it currently has recorded. To achieve this our plan involves a three step approach. We must first begin by developing a simplistic, accessible user interface that encourages user precipitation to maximize yield in terms of sample size. Then we will have to coordinate with researchers in the Duke biology department to develop a test that produces scientifically meaningful result for them to study. Finally, we will have to decide how to incorporate a database that can both handle a potentially large dataset as well as being easy to work with.

We will begin by briefly addressing the tool we intent to employ in our project. We plan to build the website with JavaScript and Vue components. Perhaps growing and developing off of the "quiz" assignment will give us a strong base to work from.

The layout and visual design of our website will be critical because categorical perception studies such as this require the largest sample size we can possibly attract. This requires a professional and simplistic website that easily guides a user through the tasks we have in mind. We do not want to lose potential data points because of the user's confusion or frustration, and we do not want to alarm or lose the trust our subjects because the website doesn't look legitimate. We intend to spend a large portion of our time maximizing this aesthetic quality aspect.

In order to develop a data set that provides statistically and scientifically significant results we must collect the data in a cautious and well informed manner. In addition, we must be

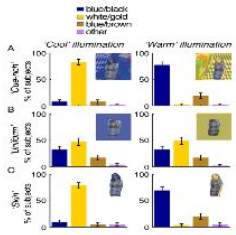
sure that the questions we ask are relevant and well designed. To accomplish these essential standards, we will be meeting with professors in the Duke biology and neurobiology departments, as well as an expert in color, to help create the main content of the quiz. Talking with these professors will help us get a more solid grasp of what the core of our project will look like.

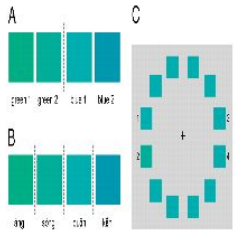
While properly collecting data is crucial, it is equally important to have the received data stored in a manageable and easily accessible way. As of right now we are considering using firebase because it is the only database that we have experience with, but we have to do more research. We want to make sure that the database we choose will be able to handle a large influx of users when the Duke researches put it out for people to take. In addition, the database will have to be easily accessed for the production of graphs or statistics work performed by our website to help visualize/conceptualize that collected data. The data will have to be easily exportable to distribute to researchers to review by their own means.

Home About

Categorical Perception Research Pool

Aid us in exploring human categorical perception. Humans and many animals are known to interpret and perceive their surroundings though a limited, categorically structured, and often culturally developed lense rather than the natural color spectrum they more accurately exist in. Research of this subject requires large sample sizes from an abundance of regions and demographics.





We were not able to add an example of the data we expect to collect and manipulate because it is really dependent on the specific variables the researchers are interested in. That being said we can generally explain the layout we expect. The names of subject will not be in be included for ethical reasons, but we will likely ask our users for basic demographic data such as the basic area they are from, their age, and gender. These in and other variables will be incorporated into later analysis to attempt to find associates between these features and the user's specific categorical perception data. Our main focus is the perception data itself which will

consist of a series of yes or no answers to color related questions. These answers will then be evaluated to gain further insight depending on the question they correlated to.

Special considerations:

We have been taking note of and recording any factors that we think will take extra consideration or special features to address. One of these is the variety of devices out users could potentially view our quiz on. Users would, in theory, be accessing our website on everything from IPhones and IPads to PC computers. Because color is very sensitive to light and the means through which it is presented, how do we ensure that all the subjects are seeing the “same” colors? How do we maintain control? We would need to include some way to calibrate the websites display based on the user or factor in the screen to late analysis. Either option will take more reading on our part to resolve and implement.