**Visual Search Experiment**

PSY310: Lab in Psychology

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**GitHub link:**

**Introduction**

Visual search is defined as a search process in which an observer scans the scenes in order to find the target object amidst the distracters. This cognitive mechanism is commonly in use in various activities of daily living, for instance, to look for a friend in a full hall or to search an object in a filled room. Knowledge of the procedures used in visual search has comprehensions about visual attention and perception in humans. Visual search is of two types: 1) Feature search 2) Conjunction search. In feature search, the target differs from the distractors by only one feature whereas in case of conjunction search , a combination of features are the differentiating factors. This task studies the relationship between stimulus, target and set size.

**Method**

The task was created and executed on PsychoPy software v2024.1.5. The experiment begins with a fixation cross appearing on the centre of the screen along with multiple L and a T. The participants are supposed to click on the target T among the distractors L . The time taken is calculated and the accuracy is recorded and calculated. The participants were typically 5 undergraduate students and each one had 200 trials. The conditions remained the same for all participants. They use the mouse to click on the target. The distractors and target appeared in a set of either 5 or 10.

**Results**

The mean RT for all the subjects for set size 5 is 1.779244653

For a set size of 5, the mean reaction time for all subjects was found to be 1.947846. For a set of 10, the mean was 2.215739.

This chart shows that the reaction time for set size 5(1) is less than that for set size 10(2).

The slope is:

Slope = (y2-y1)/ (x2- x1)

where x is the set size and y is the RT

Therefore, here the slope is 0.053579.

**Discussion**

The slope can be used to estimate and infer the the time the participant takes to identify the target overall. A good slope is one that is closer to zero. Additionally, we can see that the reaction it me for the set of 5 is less than that for the set of 10. Hence, we can infer that it is easier to identify the target when lesser number of distractors are present than when there is a higher number of distractors

**References**

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