Dissertation Analysis

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## Purpose

The purpose of this document is to record data analysis for my Dissertation.

## Experimental Design

This is a within subject experimental desing. The main variable was the feedback condition (i.e., Target). The variable levels are None, Individual, Team, and Indvidiaul\_Team. Each team expereinced each condition. The first condition for each team was the none condition. The remaining three condition were counter balanced. For example, the condition order for team 7 is the following: None, Individual, Team, Individual\_Team. The condition order for team 8 is the following: None, Team, Individual, Individual\_Team.

## Data Description

The was collected from 117 participants that formed 39 teams. Below is a sample of the data for the main metrics

knitr::kable(  
 my\_aggregate\_data[1:5,c("TeamScore",   
 "IndividualScore",   
 "CI\_team",   
 "CI\_ind",   
 "II\_team",   
 "II\_ind",   
 "ERROR\_team\_unique",   
 "ERROR\_ind\_unique",   
 "ERROR\_team\_total",  
 "ERROR\_ind\_total")]  
)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TeamScore | IndividualScore | CI\_team | CI\_ind | II\_team | II\_ind | ERROR\_team\_unique | ERROR\_ind\_unique | ERROR\_team\_total | ERROR\_ind\_total |
| 56.4079 | 60.5259 | 17 | 4 | 1 | 0 | 5 | 2 | 21 | 7 |
| 56.4079 | 48.0160 | 17 | 1 | 1 | 0 | 5 | 2 | 21 | 5 |
| 56.4079 | 53.6149 | 17 | 5 | 1 | 1 | 5 | 5 | 21 | 9 |
| 57.8487 | 65.4831 | 18 | 6 | 1 | 0 | 5 | 3 | 42 | 17 |
| 57.8487 | 56.6639 | 18 | 3 | 1 | 0 | 5 | 2 | 42 | 4 |

## Explore

I seek to answer the following general questions: 1) Are there patters in the data, Is there an interaction between Target (i.e., individual, team, and Indvidual\_Team) and Session Order.

### Performance Metrics

I first want to explore the main performance metrics. The main performance metrics are the score (individual and team), correct items collected, incorrect items collected, errors (total and unique), and time remaining. I want to do this for the individual and team level analysis.

#### Scores

#### Correct Items Collected

#### Incorrect Items Collected

#### Time remaining

#### Errors (Unique)

#### Errors (Total)

summary(cars)

## speed dist   
## Min. : 4.0 Min. : 2.00   
## 1st Qu.:12.0 1st Qu.: 26.00   
## Median :15.0 Median : 36.00   
## Mean :15.4 Mean : 42.98   
## 3rd Qu.:19.0 3rd Qu.: 56.00   
## Max. :25.0 Max. :120.00

## Including Plots

You can also embed plots, for example:



Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.