Analysis Report for PS_2025-05-07T16-01-22-896Z_data

Scatter Plots of Gaze Data (Red Ellipse Represents Center of Highest Concentration)

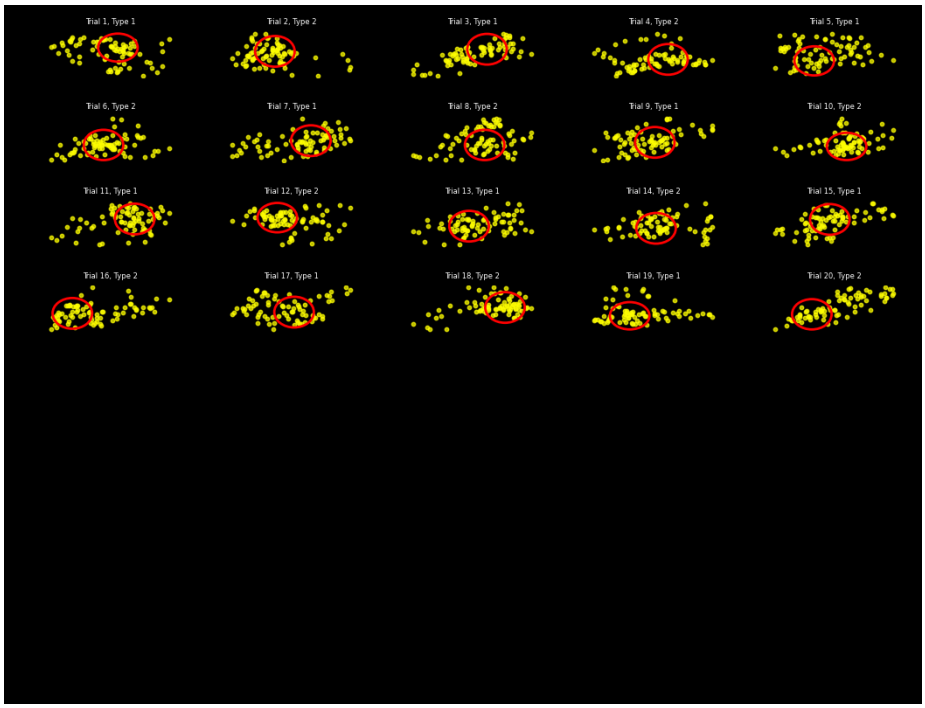

Figure 1: Scatter Plots

Violin Plot of Gaze Data

Descriptive Statistics for Gaze Percentages (Target vs Combined Non-Target Objects)

Measure	Target Object Gaze	Non-Target Objects Gaze
Mean	40.07885962582831	20.935837979475558
Standard Deviation	29.153075983255068	31.893880798670406
Median	51.973684210526315	0.0
Min	0.0	0.0
Max	84.81012658227847	88.31168831168831

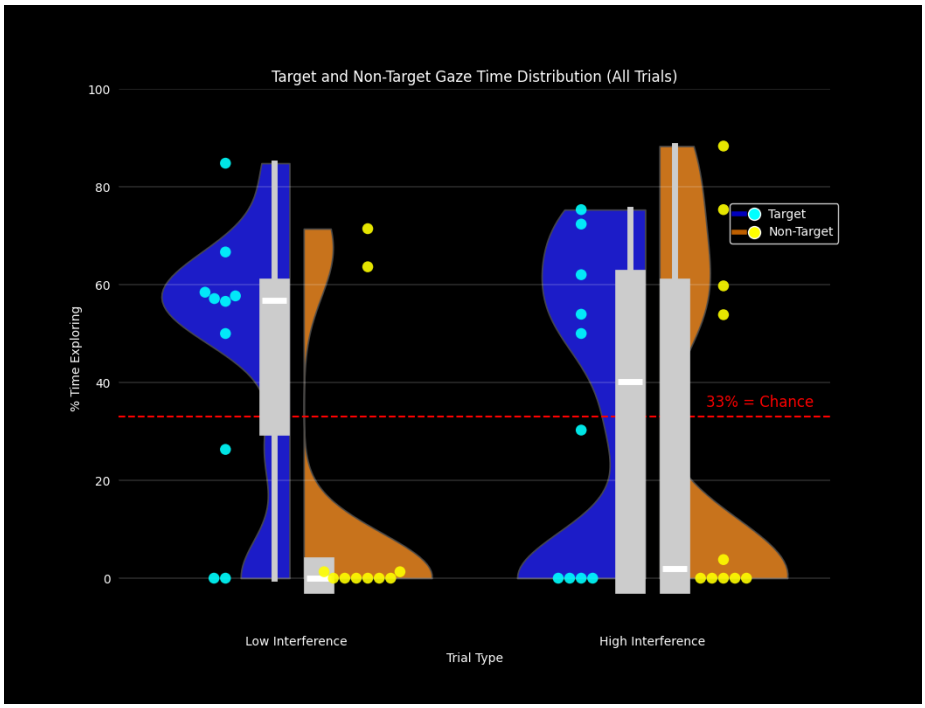

Figure 2: Violin Plot

Shapiro-Wilk Test for Normality

This test checks whether the data follows a normal distribution. It returns a test statistic and a p-value. A p-value less than 0.05 indicates that the data significantly deviates from a normal distribution.

Measure	W Statistic	p-value
Target Gaze	0.8538180201643507	0.006180
Non-Target Gaze	0.6541159631550887	0.000011

Levene's Test for Homoscedasticity

W Statistic	p-value
0.16341313532011342	0.688300

Wilcoxon Test (One-Sided; Target >= 33%)

W Statistic	p-value
126.0	0.215800

Wilcoxon Test (Two-Sided; Target vs Non-Target)

W Statistic	p-value
82.5	0.400835

Difference: 19.14 ### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
1.9310832829288145	38	0.060958

Difference: 19.14

ANOVA (Target Gaze Percentages across Trial Types)

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p-value
0.7117953773641448	1	18	0.409921

Executive Summary

This analysis examined the gaze data across different trial types to determine if there were significant differences in gaze behavior. The Shapiro-Wilk test for normality indicated that the target gaze data did not follow a normal distribution (p-value: 0.006180), while the non-target gaze data did not follow a normal distribution (p-value: 0.000011). Levene's test for homoscedasticity showed that the variances between target and non-target gaze data were equal (p-value: 0.688300).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.215800). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.400835).

The independent t-test comparing target gaze percentages between Trial Type 1 and Trial Type 2 showed that there was no significant difference between the two trial types (p-value: 0.060958). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.409921).

Overall, these results provide insights into the gaze behavior across different trial types, highlighting significant differences where applicable.