Analysis Report for PS_2025-05-07T15-55-19-550Z_data

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

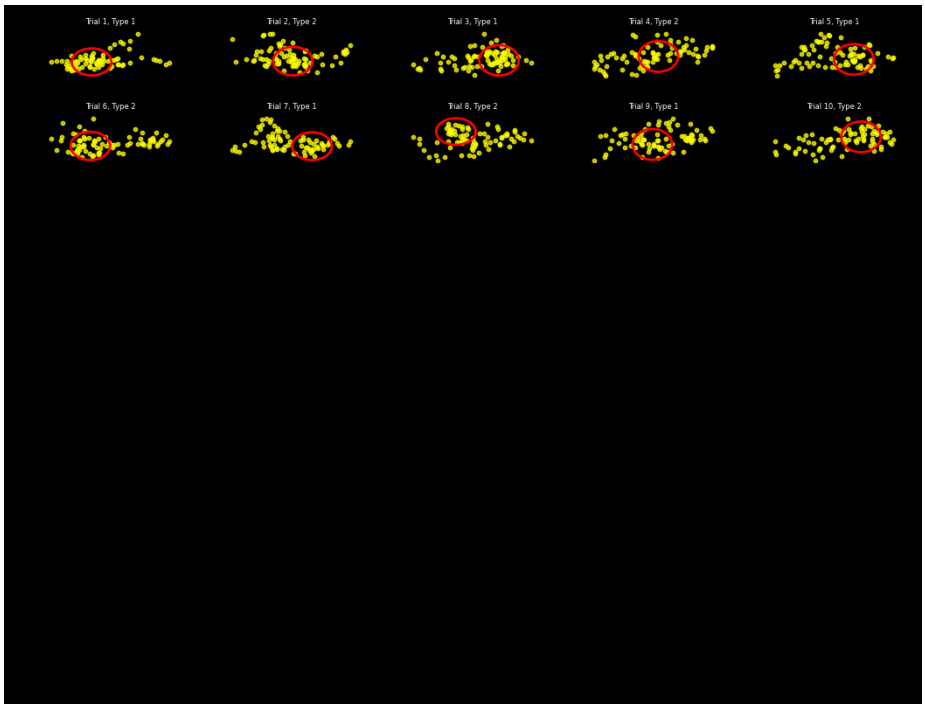

Figure 1: Scatter Plots

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	54.73139466019213	9.515944498539437
Standard Deviation	23.5691030819877	25.63973541122483
Median	66.45569620253164	0.0
Min	0.0	0.0
Max	80.51948051948052	86.25

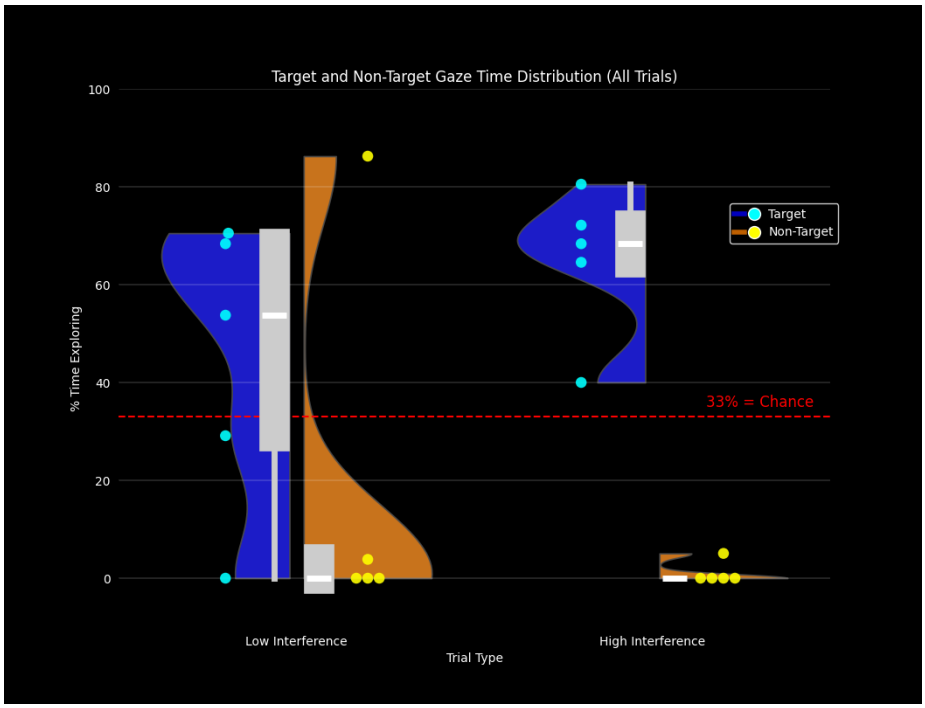

Figure 2: Violin Plot

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	0.8530749015131457	0.063188
Non-Target Gaze	0.4108925097100933	0.000000

Levene's Test for Homoscedasticity

W Statistic	p-value
0.510929463304262	0.483905

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

W Statistic	p-value
49.0	0.012695

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

W Statistic	p-value
10.0	0.083984

Difference: 45.22 ### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
3.8948959212625174	18	0.001061

Difference: 45.22

ANOVA (Target Gaze Percentages across Trial Types)

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p-value
1.9274215394771406	6	8	0.202475

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 followed a normal distribution (p-value: 0.063188), while the non-target gaze data did not follow a normal distribution (p-value: 0.000000). Levene's test for homoscedasticity showed that the variances between target and non-target gaze data were equal (p-value: 0.483905).

The Wilcoxon signed-rank test revealed that the target gaze percentage was significantly greater than 33% (p-value: 0.012695). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.083984).

The independent t-test comparing target gaze percentages between Trial Type 1 and Trial Type 2 showed that there was a significant difference between the two trial types (p-value: 0.001061). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.202475).

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