Analysis Report for TJ_2025-03-13T17-00-10-124Z_data

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

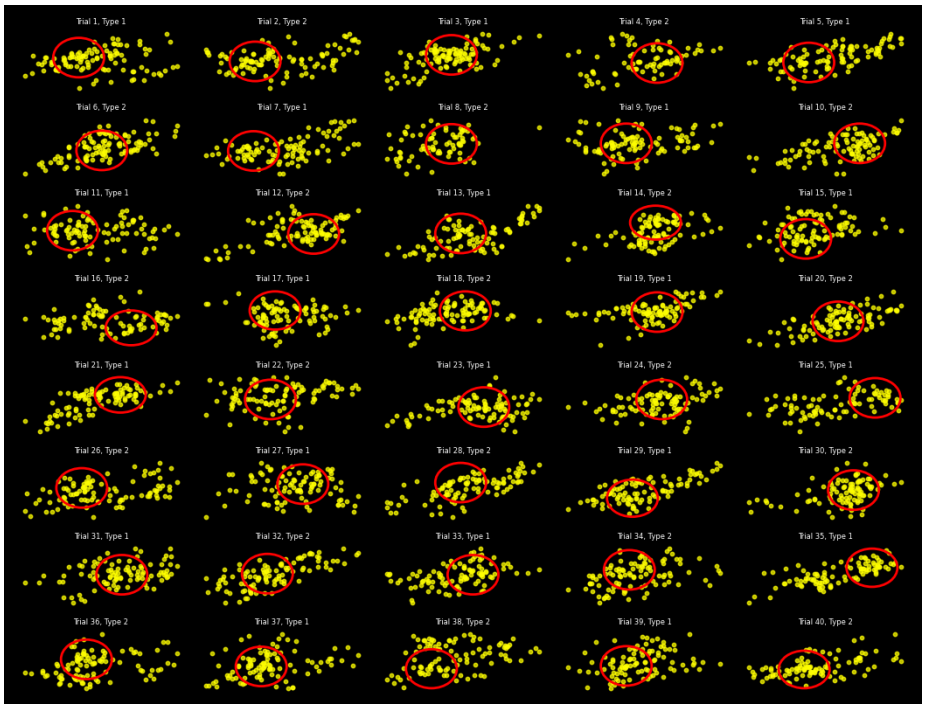

Figure 1: Scatter Plots

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	37.79486897086264	33.75145056974461
Standard Deviation	38.64845818263069	39.662827616019776
Median	29.08163265306122	1.1460761460761462
Min	0.0	0.0
Max	98.96907216494846	97.9381443298969

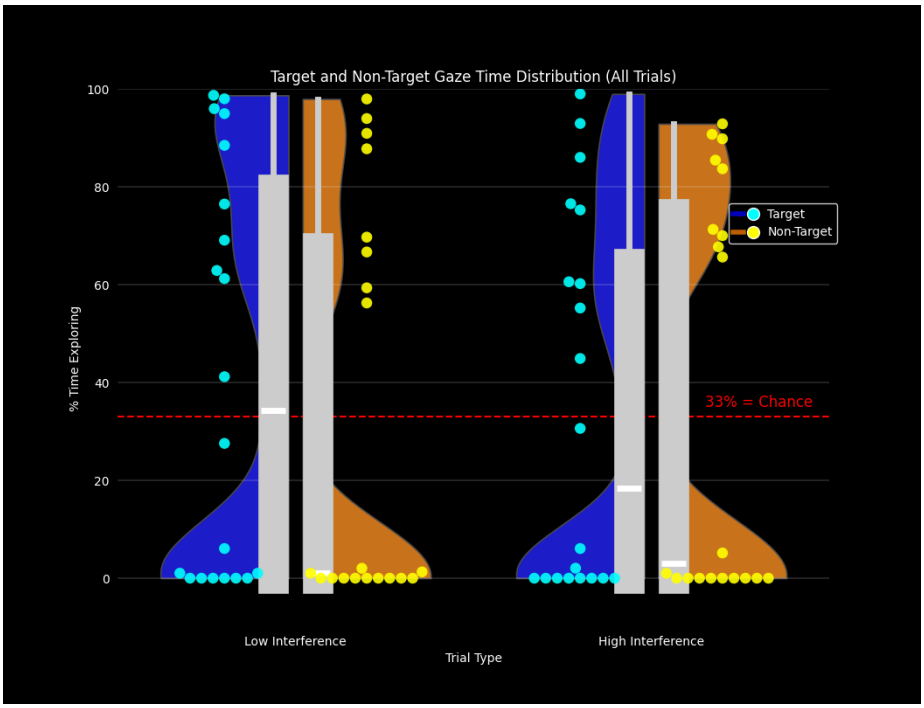

Figure 2: Violin Plot

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	0.8058427970919966	0.000009
Non-Target Gaze	0.7245222240753911	0.000000

Levene's Test for Homoscedasticity

W Statistic	p-value
0.08270209252767967	0.774431

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

W Statistic	p-value
464.0	0.232818

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

W Statistic	p-value
391.0	0.798424

Difference: 4.04 ### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
0.45596887646811296	78	0.649679

Difference: 4.04

ANOVA (Target Gaze Percentages across Trial Types)

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p-value
0.28429640030209585	1	38	0.597004

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: 0.000009), 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: 0.774431).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.232818). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.798424).

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: 0.649679). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.597004).

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