Analysis Report for AMRI_2025-05-02T16-37-07-691Z_data

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

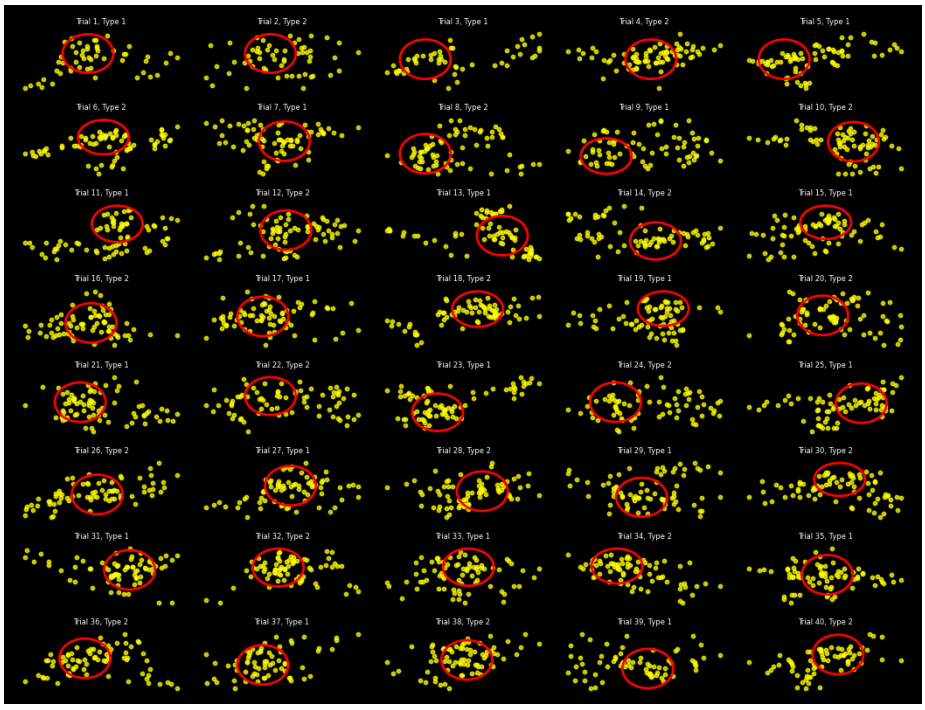

Figure 1: Scatter Plots

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	32.52325076940296	18.47608233580427
Standard Deviation	25.831673788880423	26.303479586852877
Median	34.45945945945946	0.0
Min	0.0	0.0
Max	82.6923076923077	89.1891891891892

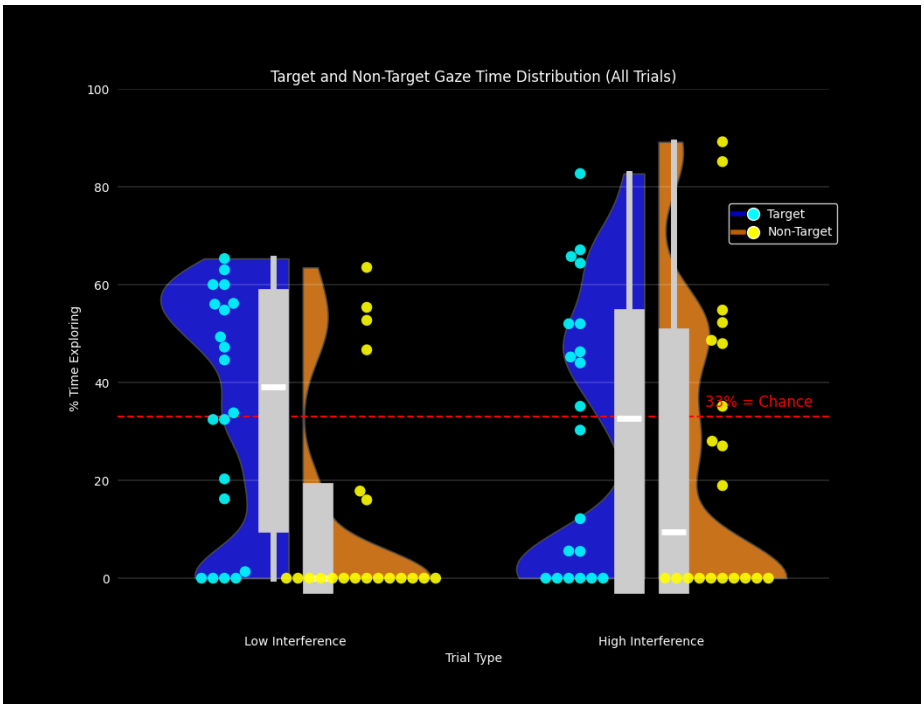

Figure 2: Violin Plot

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	0.8846264512443373	0.000703
Non-Target Gaze	0.7251083108685785	0.000000

Levene's Test for Homoscedasticity

W Statistic	p-value
0.9694973326737941	0.327850

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

W Statistic	p-value
368.0	0.714170

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

W Statistic	p-value
272.0	0.063596

Difference: 14.05 ### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
2.3795106496262726	78	0.019779

Difference: 14.05

ANOVA (Target Gaze Percentages across Trial Types)

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p-value
0.2584280152059396	1	38	0.614141

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: 0.000703), 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: 0.327850).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.714170). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.063596).

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: 0.019779). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.614141).

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