

# Analysis Report for AMRI\_2025-03-13T17-32-52-152Z\_\_data

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

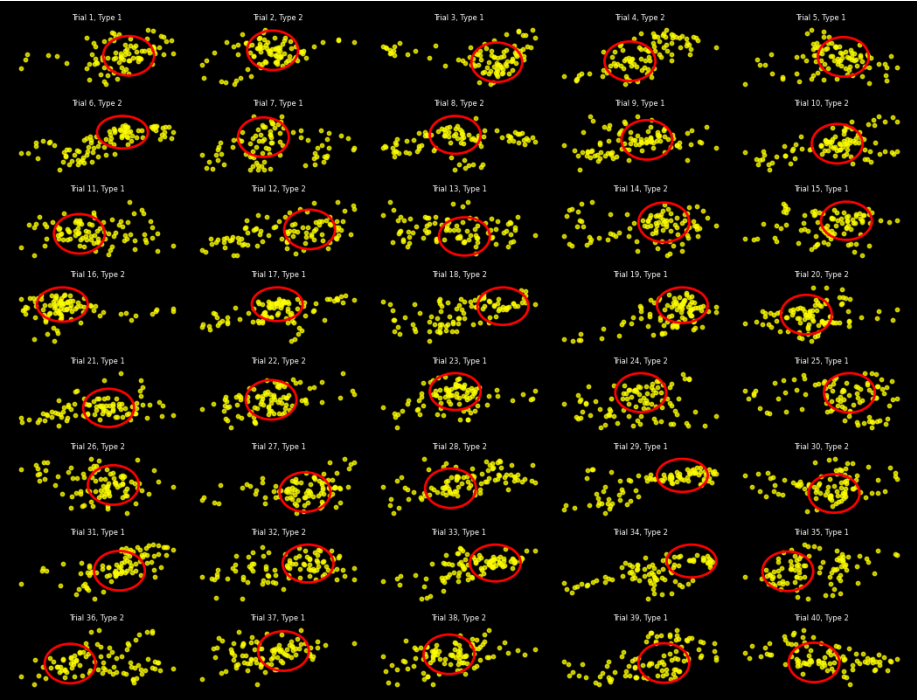


Figure 1: Scatter Plots

## 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	26.583411997091524	37.09329906000504
Standard Deviation	30.18453213827482	31.992245143023624
Median	11.956521739130434	35.30465949820788
Min	0.0	0.0
Max	91.39784946236558	81.72043010752688

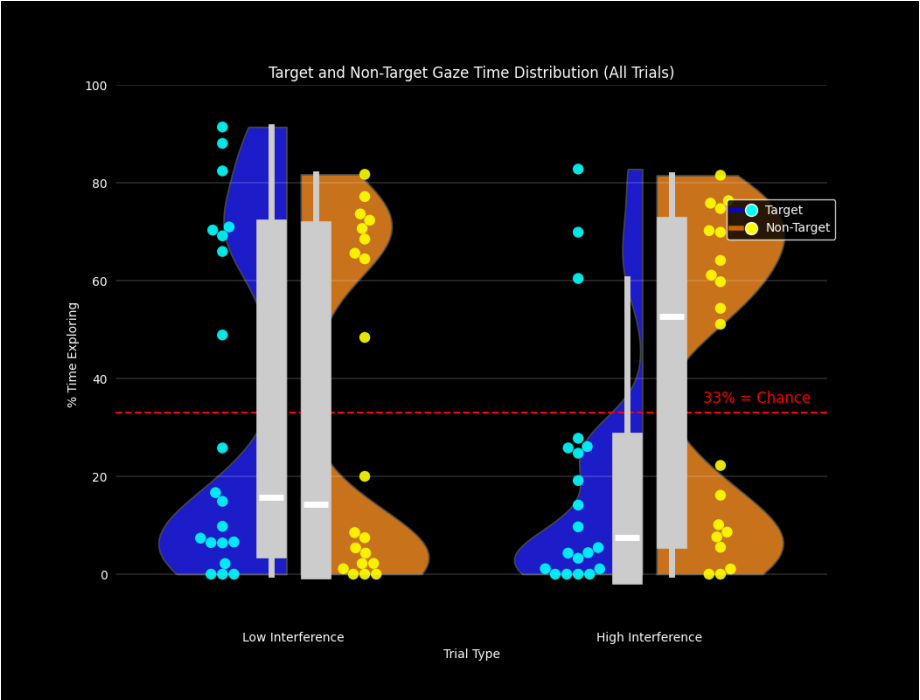


Figure 2: Violin Plot

### 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	0.7934535935917045	0.000005
Non-Target Gaze	0.8101536589445392	0.000011

### Levene's Test for Homoscedasticity

W Statistic	p-value
3.6173249730881234	0.060873

### Wilcoxon Test (One-Sided; Target $\geq$ 33%)

W Statistic	p-value
341.0	0.823308

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

W Statistic	p-value
350.5	0.423836

### Difference: -10.51 ### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
-1.4922227914998296	78	0.139675

Difference: -10.51

### ANOVA (Target Gaze Percentages across Trial Types)

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p-value
2.557766584207627		38	0.118036

### 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: 0.000005), 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: 0.060873).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.823308). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.423836).

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: 0.139675). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.118036).

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