

# Analysis Report for TJ\_2025-04-10T15-19-14-232Z\_data

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

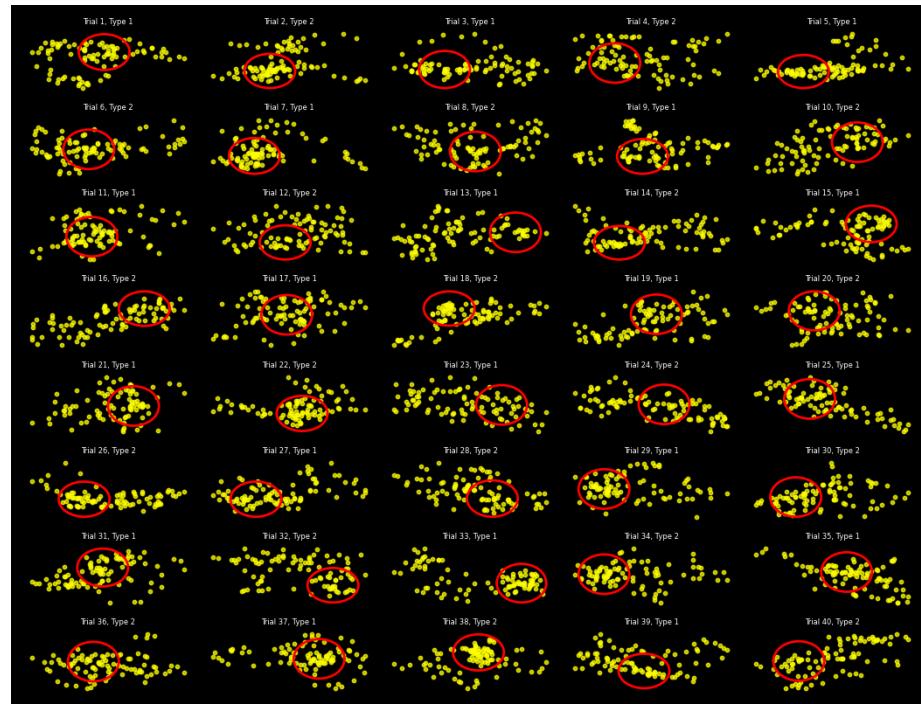


Figure 1: Scatter Plots

## 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	28.49652619737551	24.31314828229274
Standard Deviation	28.69376199304908	31.706422533766343
Median	17.391304347826086	1.6364070711896799
Min	0.0	0.0
Max	86.81318681318682	81.72043010752688

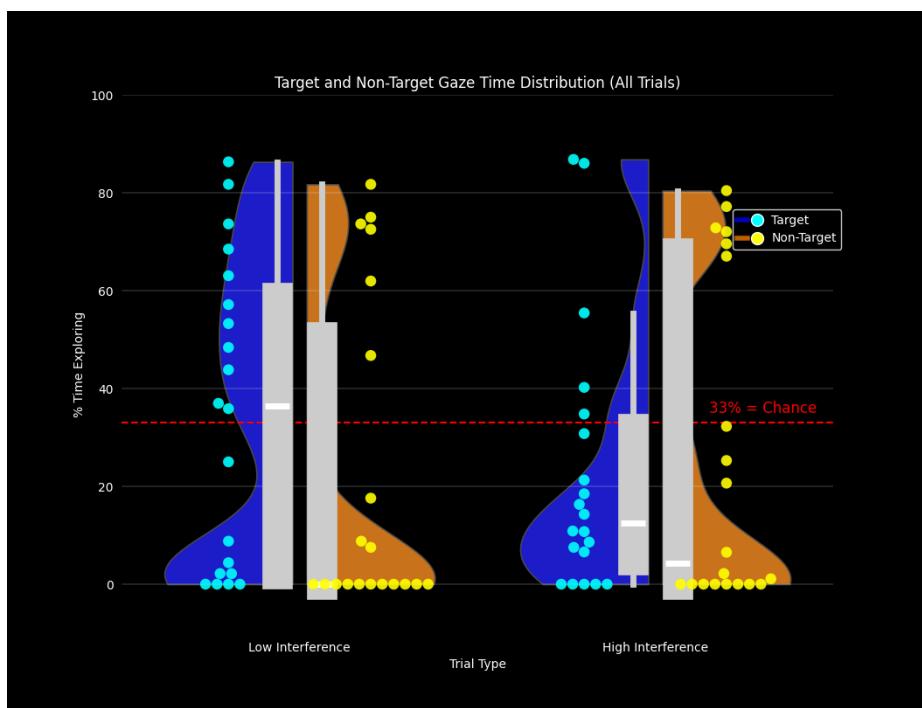


Figure 2: Violin Plot

### **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	0.8594029683487523	0.000153
Non-Target	0.7144899297365037	0.000000
Gaze		

### **Levene's Test for Homoscedasticity**

W Statistic	p-value
0.004396956795110737	0.947301

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

W Statistic	p-value
324.0	0.876470

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

W Statistic	p-value
381.0	0.696676

**Difference:** 4.18 #### T-Test (Two-Sided; Target vs Non-Target)

T-Statistic	Degrees of Freedom	p-value
0.6109372093506288	78	0.543017

**Difference:** 4.18

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

F-Statistic	Degrees of Freedom (Between)	Degrees of Freedom (Within)	p- value
1.7741357024532338		38	0.190805

### 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: 0.000153), 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: 0.947301).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.876470). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.696676).

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: 0.543017). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.190805).

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