# Analysis Report for TEST_2025-01-17T19-50-11-658Z_data

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

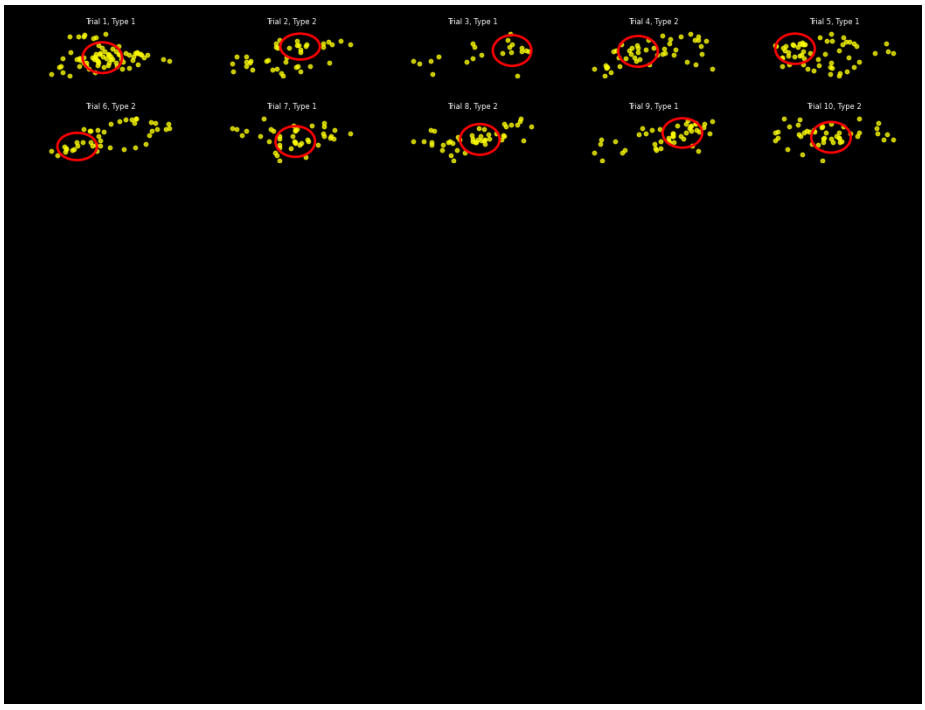


Figure 1: Scatter Plots

### 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 | 40.68791482465925 | 11.384779471735992 |
| Standard Deviation | 28.536724004514383 | 20.779068429261343 |
| Median | 52.22693531283139 | 0.0 |
| Min | 0.0 | 0.0 |
| Max | 75.0 | 68.18181818181817 |

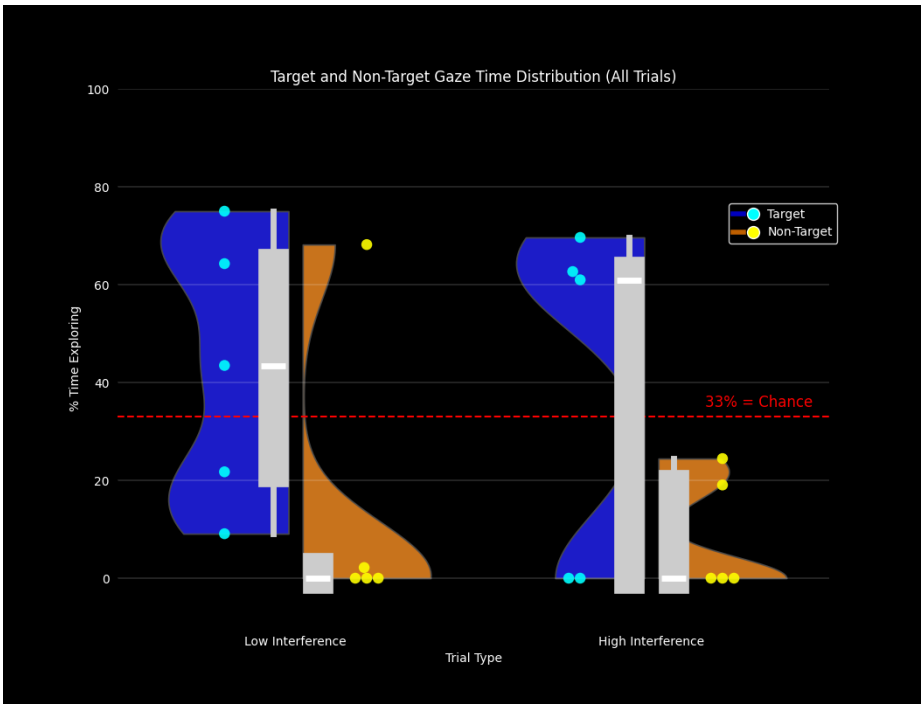


Figure 2: Violin Plot

**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 | 0.8561164034052001 | 0.068658 |
| Non-Target Gaze | 0.6144693183448944 | 0.000082 |

**Levene's Test for Homoscedasticity**

| W Statistic | p-value |
|---|---|
| 2.6352527955474647 | 0.121898 |

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

| W Statistic | p-value |
|---|---|
| 35.0 | 0.238281 |

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

| W Statistic | p-value |
|---|---|
| 9.0 | 0.064453 |

**Difference**: 29.30 ### T-Test (Two-Sided; Target vs Non-Target)

| T-Statistic | Degrees of Freedom | p-value |
|---|---|---|
| 2.490327162912065 | 18 | 0.022761 |

**Difference**: 29.30

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

| F-Statistic | Degrees of Freedom (Between) | Degrees of Freedom (Within) | p-value |
|---|---|---|---|
| 0.040724800272831464 | | 8 | 0.845107 |

**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: 0.068658), while the non-target gaze data did not follow a normal distribution (p-value: 0.000082). Levene's test for homoscedasticity showed that the variances between target and non-target gaze data were equal (p-value: 0.121898).

The Wilcoxon signed-rank test revealed that the target gaze percentage was not significantly greater than 33% (p-value: 0.238281). Additionally, the Wilcoxon test comparing target and non-target gaze percentages indicated that there was no significant difference between the two conditions (p-value: 0.064453).

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: 0.022761). Finally, the one-way ANOVA test indicated that the target gaze percentages across different trial types were not significantly different (p-value: 0.845107).

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