## Posterior Predictive Check
Model−predicted lines should resemble observed data line
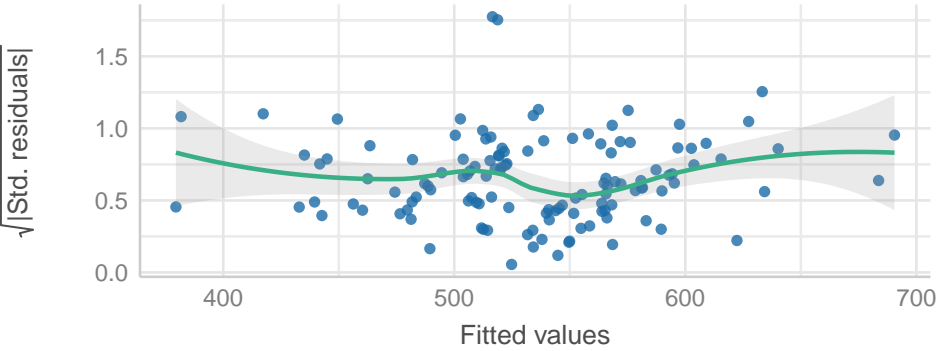
*x-axis:* resistance
*y-axis:* Density

— Observed data  — Model−predicted data
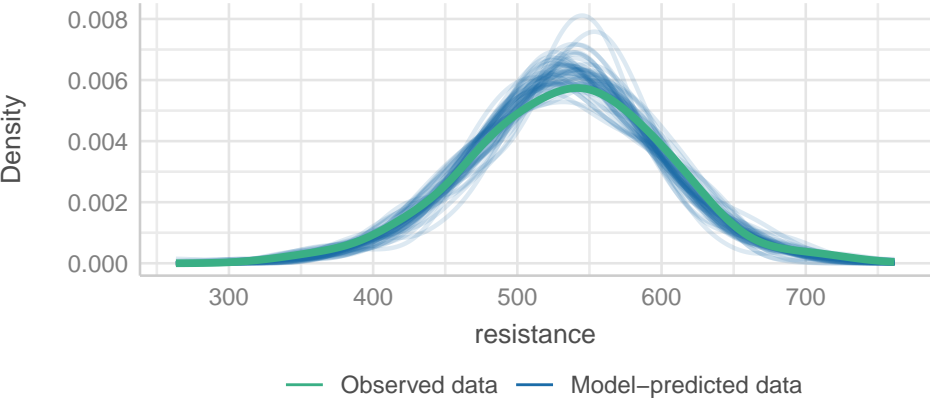
## Linearity
Reference line should be flat and horizontal

*x-axis:* Fitted values
*y-axis:* Residuals
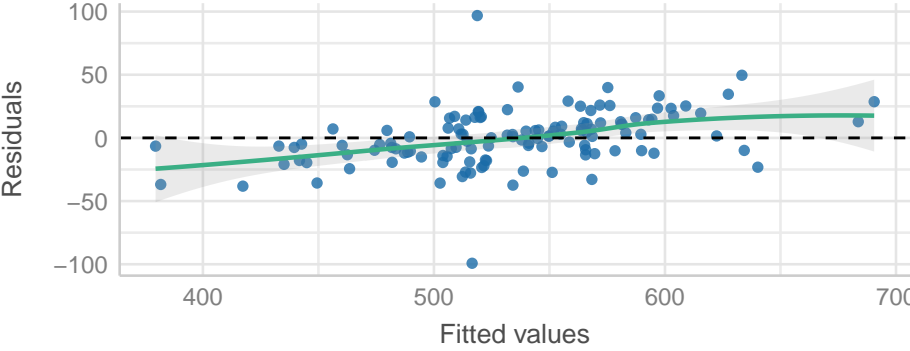
## Homogeneity of Variance
Reference line should be flat and horizontal

*x-axis:* Fitted values
*y-axis:* $\sqrt{|\text{Std. residuals}|}$

## Influential Observations
Points should be inside the contour lines

*x-axis:* Leverage ($h_{ii}$)
*y-axis:* Std. Residuals

0.5
0.5
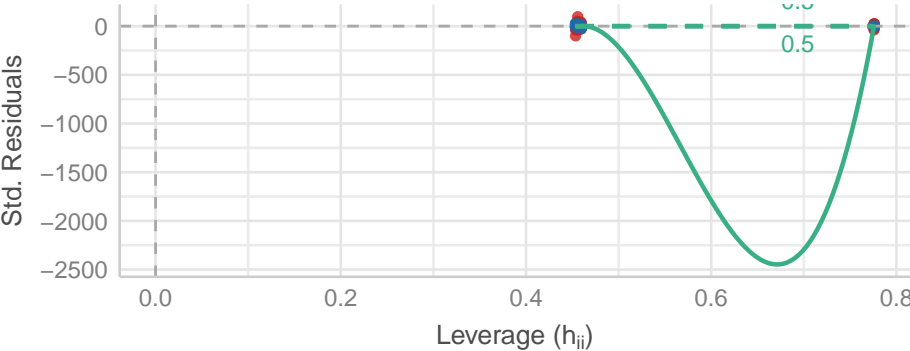
## Collinearity
High collinearity (VIF) may inflate parameter uncertainty

*x-axis:* allocation_group, allocation_group:visit, visit
*y-axis:* Variance Inflation Factor (VIF, log−scaled)

— Low (< 5)
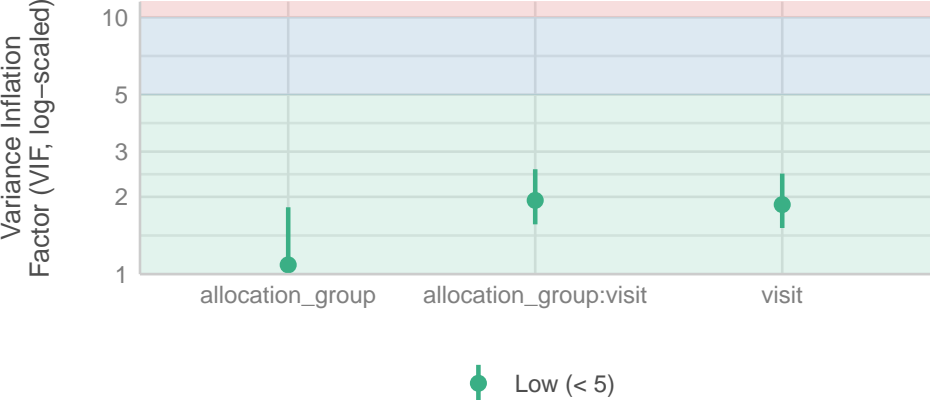
## Normality of Residuals
Dots should fall along the line

*x-axis:* Standard Normal Distribution Quantiles
*y-axis:* Sample Quantile Deviations
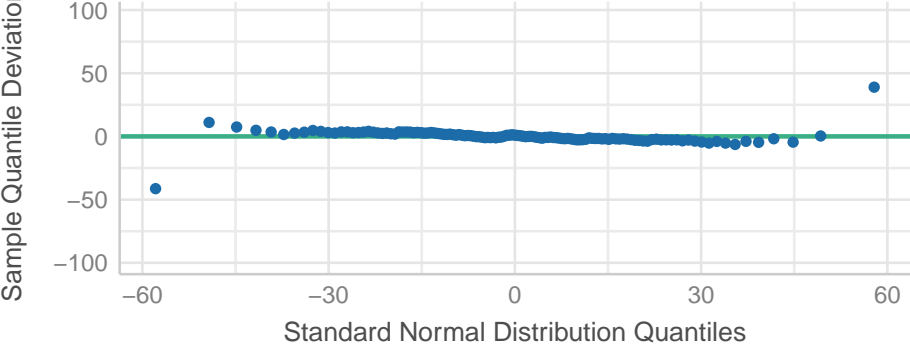
## Normality of Random Effects (record_id)
Dots should be plotted along the line

*x-axis:* Theoretical Quantiles
*y-axis:* RE Quantiles