Posterior Predictive Check
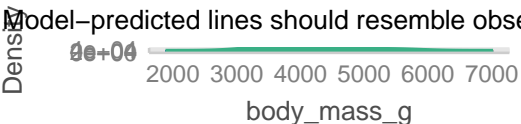Model-predicted lines should resemble observed data line

Density

body_mass_g

— Observed data — Model-predicted data

Linearity
Reference line should be flat and horizontal

Residuals

Fitted values
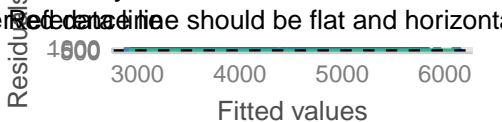
Homogeneity of Variance
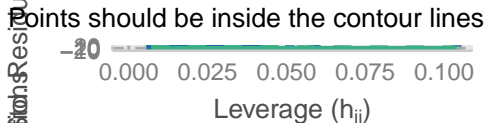Reference line should be flat and horizontal

$\sqrt{|\text{Std. residuals}|}$

Fitted values
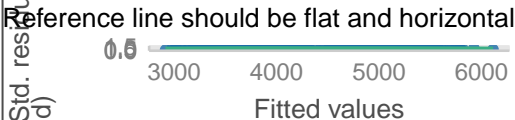
Influential Observations
Points should be inside the contour lines

Std. Residuals

Leverage (h_{ii})

Collinearity
High collinearity (VIF) may inflate parameter uncertainty

Variance Inflation Factor (VIF, log-scaled)

bill_depth_mm bill_length_mm flipper_length_mm species

Low (< 5)   Moderate (< 10)   High (>= 10)

Normality of Residuals
Dots should fall along the line

Sample Quantile Deviations

Standard Normal Distribution Quantiles