

Formula Syntax

Symbol	Example	Description
~	$y \sim x1$	Defines the formula (necessary to create a formula object)
+	$y \sim x1 + x2$	Include the variable
-	$y \sim -1 + x1$	Delete a term, usually a 1 for the intercept
:	$y \sim x1 + x1:x2$	Interaction term
*	$y \sim x1 * x2$	Interaction between the variables and each individually; same as $y \sim x1 + x2 + x1:x2$
^	$y \sim (x1, x2, x3)^3$	Include variables and all interactions, up to 3-way interactions
I ()	$y \sim I(x1^2)$	Wrapper for transforming variables without having to create a new variable
poly ()	$y \sim poly(x1, 2)$	Creates polynomial terms up to the degree specified

Other Regression Models

- function glm: generalized linear models
 - logit, probit
 - poisson
- packages nlme and lme4: non-linear mixed effects models
 - random and fixed effects, hierarchical
- Other specialized packages