Formula Syntax

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