5. Fun with regression

Frank Edwards

School of Criminal Justice, Rutgers - Newark

Let's complete exercise 10.5 from GHV

1. Load the file kidiq.csv
2. Listen to a short rant from Frank about why IQ scores are BS

Fit a regression of child test score's on mother's age.

- Display the data and fitted model
- Check assumptions
- Interpret the slope coefficient
- What assumptions are you making?

- Add mother's education
- Interpret both slope coefficients
- Have your conclusions about age changed?

- Create a binary (indicator) for mother's HS completion
- Estimate interactions between HS completion and mother's age
- Plot each regression line for both HS completion groups

(d) Out-of-sample prediction for validation

- Fit a model on ONLY the first 200 observations
- Use your model to predict scores for the NEXT 200.
- Plot your predictions against the observed test scores