EE5373: Data Modeling Using R
Fall, 2022
Department of Electrical and Computer Engineering
University of Minnesota

Lab 3: Simple linear regression.

Due date: See the due date shown on the class web page.

Goal: This lab introduces simple linear regression modeling using the CPU DB database.

What to do:

Develop a simple linear regression model for the following benchmark programs available in the CPU DB database: int95, int06, fp95, fp06. Use "clock" as the input (independent) variable and the normalized performance, "nprof," as the output (dependent) variable. Plot each regression model on the corresponding scatter plot of the data used to develop the model (see Figure 3.2 for an example). Evaluate the quality of the models by discussing the residuals, the p-values of the coefficients, the residual standard errors, and the R^2 values, and by performing appropriate residual analysis.

What to turn in for grading:

Write a short lab report showing each of your models (that is, the coefficients for each of your models), including appropriate plots, and explaining your quality analysis.