ECON 6910
Applied Econometrics
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Problem Set 8
Due Date: May 3, 2021

Write a script file that estimates the CDF for an arbitrary variable X_i at a specific point in the support x.

a. Using the data set wage2.csv, estimate the mean and the variance for education ($educ$).

b. Now fit the data using a normal CDF $pnorm(x, e\bar{duc}, \sigma_{educ})$ across the minimum value of education up to the maximum value for education with a step size equal to one year of education. The grid can be created by using the following code educgrid=min(educ):1:max(educ).

c. Now estimate the nonparametric CDF using your script and plot the normal fit along with your nonparametric estimate. How do they compare?

d. Now do the same excercise but using a nonparametric density estimate (use a standard normal kernel function) for a normal reference rule-of-thumb bandidth and compare to a normal PDF fit.