Nonparametric methods
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Course outline

1. Nonparametric density estimators
   - Empirical densities
   - The kernel method
   - Statistical properties of the kernel method
   - Other methods for density estimation
   - Multivariate density estimation
   - Stata commands.

2. Linear nonparametric regression estimators
   - Regression splines
   - The kernel method
   - The nearest neighbor method
   - Cubic smoothing splines
   - Local polynomial regression
   - Statistical properties of linear smoothers
   - Methods for high dimensional data
   - Stata commands.

3. Distribution function and quantile function estimators
   - The empirical distribution function
   - The empirical quantile function
   - Estimating the conditional quantile function
   - Estimating the conditional distribution function
   - Relationships between the two approaches
   - Generalizations
   - Stata commands.

References


Suggestions for further reading will be provided in class.