In this talk, the usual kernel density estimation method is adopted to estimate the density of a function of a set of random variables. The integrated square error (ISE) and its mean (MISE) are given and approximated. Further, a central limit theorem for the difference $\text{ISE} - \text{MISE}$ is developed. A short discussion of the bandwidth selection problem is then presented, and finally an application of this generalization to testing normality is briefly offered. Some interesting open questions will conclude the presentation.