

Using Discriminant Analysis to Forecast Crime Rate in Nigeria

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Abstract : This research work is based on using discriminant analysis to forecast crime rate in Nigeria between 1996 and 2008. The work is interested in how gender (male and female) relates to offences committed against the government, against other properties, disturbance in public places, murder/robbery offences and other offences. The data used was collected from the National Bureau of Statistics (NBS). SPSS, the statistical package was used to analyse the data. Time plot was plotted on all the 29 offences gotten from the raw data. Eigenvalues and Multivariate tests, Wilks' Lambda, standardized canonical discriminant function coefficients and the predicted classifications were estimated. The research shows that the distribution of the scores from each function is standardized to have a mean 0 and a standard deviation of 1. The magnitudes of the coefficients indicate how strongly the discriminating variable affects the score. In the predicted group membership, 172 cases that were predicted to commit crime against Government group, 66 were correctly predicted and 106 were incorrectly predicted. After going through the predicted classifications, we found out that most groups numbers that were correctly predicted were less than those that were incorrectly predicted.

Keywords : discriminant analysis, DA, multivariate analysis of variance, MANOVA, canonical correlation, and Wilks' Lambda

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