



# INDIAN INSTITUTE OF SOCIAL WELFARE AND BUSINESS MANAGEMENT

## DEPARTMENT OF MBA

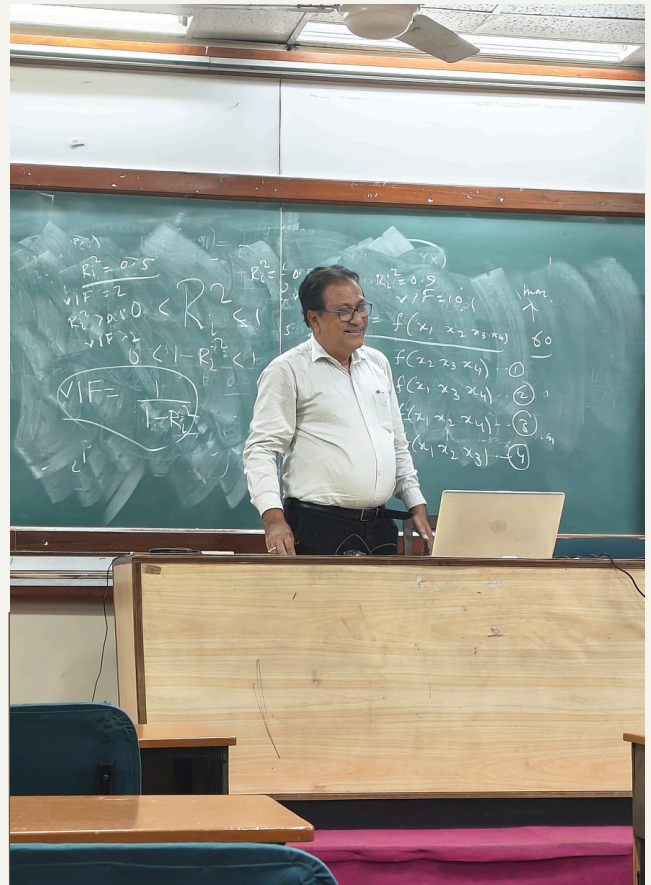
presents:

**WORKSHOP  
ON: DATA  
ANALYSIS  
USING  
PYTHON**

CONDUCTED BY:



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BANDYOPADHYAY**



# SEMINAR HIGHLIGHTS

IISWBM successfully conducted a session on Python, primarily focusing on concepts used in business analytics and statistical modelling, particularly in regression analysis. Having a strong grasp of these concepts help analysts build more reliable predictive models and interpret data more accurately.

One of the key topics covered was multicollinearity, which occurs when independent variables in a regression model are highly correlated with each other. This makes it difficult to identify the individual impact of each variable on the dependent variable and can lead to unstable coefficient estimates.

We also learned about autocorrelation and heteroskedasticity, two common issues that affect regression models. Autocorrelation refers to the correlation of error terms across time, often observed in time-series data such as sales trends. Heteroskedasticity occurs when the variance of the error terms is not constant across observations, which can make statistical testing less reliable.

In addition, the session briefly introduced non-parametric regression, a flexible approach where the relationship between variables is determined by the data rather than assuming a fixed mathematical form.

Finally, we discussed logistic regression, which is commonly used for classification problems where the dependent variable is categorical. It helps estimate probabilities and is widely applied in business fields such as marketing, finance, and risk analysis.

Overall, the session provided valuable insights into key concepts used in regression analysis and business analytics. By understanding issues such as multicollinearity, autocorrelation, and heteroskedasticity, analysts can identify potential problems in regression models and improve the accuracy of their results. Additionally, techniques like non-parametric regression and logistic regression expand the range of analytical tools available for handling complex data and classification problems. These concepts are essential for making informed, data-driven decisions in business and research.

