



**VIDYASHILP
UNIVERSITY**

WORKSHOP: BIG DATA AND MACHINE LEARNING FOR DECISION MAKING

16th to 20th September 2024



WORKSHOP OBJECTIVE

The objective of this workshop is to develop an appreciation of the fundamentals of econometrics and machine learning tools and their applications to analyzing big data. The teaching will be a blend of (i) theory and (ii) hands-on exercises with datasets from economics, business, and finance, executed in R/Python. Special care will be taken to ensure that candidates become familiar with the challenges faced by actual data and the approximations that need to be made to develop robust techniques to handle real-world situations.

A blend of theory and hands-on exercises with datasets from economics, business, and finance will help participants develop the confidence to apply econometrics tools and machine learning techniques on large datasets, interpret the results, and make comparisons. As an outcome, participants will be better equipped to pursue careers in data analytics, having gained the necessary skills to handle real-world data challenges.

This workshop aims to equip participants who want to develop a career in data analytics by providing a comprehensive understanding of econometrics tools and machine learning techniques, along with practical experience in applying these methods to large datasets and interpreting the results effectively.

WHO CAN APPLY

This workshop is designed for individuals seeking to enhance their expertise in econometrics and machine learning. While familiarity with R and Python is advantageous, it is not a strict requirement. We welcome:

Doctoral Students

Faculty members in the early phase of their career

Researchers from Think Tanks

Industry professionals in the early phase of their career

Postgraduate students

NUMBER OF SEATS

There are 40 seats available for this workshop. Should the demand exceed this number, we may offer a rerun to ensure that all interested participants have the opportunity to participate.

APPLICATION PROCEDURE AND TIMELINES

Procedure: Interested applicants are required to submit (i) a statement of up to 300 words on "How This Workshop Will Be Useful for Me," and (ii) a concise vita not exceeding one page. Please include any familiarity with tools such as R and Python in your vita.

Application Window: August 5, 2024 – August 25, 2024

Selection Communication: By August 30, 2024

APPLY NOW

TRANSPORT AND ACCOMMODATION

Selected candidates are responsible for their own travel arrangements. The University will provide accommodation on a twin-sharing basis for outstation participants.

WORKSHOP FEES

The fee for the entire workshop is ₹7499 (including GST).

WORKSHOP OUTLINE

DAY 1

Primer on BIG Data, Econometrics and Machine Learning Econometric Techniques for Regression and Classification

DAY 2

Basic Machine Learning Techniques for Regression and Classification

DAY 3

Data Visualization and Advanced Machine Learning Techniques

DAY 4

Natural Language Processing

DAY 5

Ethics of Big Data and AI, Project Presentation, followed by Valedictory Ceremony, Certificate and Award Distribution

TOPICS COVERED IN THE WORKSHOP

- Primer on Big data
 - Changing landscape in data analytics
 - Tools of Econometrics and Machine Learning
 - Handling complex datasets
- Econometrics
 - Linear regression
 - Discrete choice models
- Supervised learning
 - Regression and Classification problems
 - Ridge and Lasso regression
 - Decision Trees
 - Random Forest
 - Boosting methods
 - Support Vector Machine (SVM)
 - Naive Bayes
- Data Visualization
- Unsupervised learning
 - Clustering techniques
 - Anomaly detection
 - Dimension reduction
- Deep learning
 - Artificial Neural networks
 - Convolution Neural Networks
- Natural Language Processing
 - Text extraction and processing
 - Feature engineering
 - Sentiment Analysis
- Generative AI
 - Large Language Models

RESOURCE PERSONS

Dr. Subrata Sarkar, MELTA Analytics

Dr. Smitha Rao, Professor & Program Chair, Vidyashilp University

Dr. Mahendra B M, Associate Professor, Vidyashilp University

Dr. Shital Bhatt, Associate Professor, Vidyashilp University

Dr. Bipin Sony, Assistant Professor, Vidyashilp University

DATES AND DURATION

Dates: September 16 – 20

Hours: 9.30 am to 5.30 pm (eight hours with two hours break)

Duration: $5 \times 6 = 30$ hours

FOR QUERIES

Write to us at: BDML_Workshop_2024@vidyashilp.edu.in

VENUE

Vidyashilp University

#125, Bettenahalli, Kundana Hobli,

Chapparkallu Road, Bengaluru – 562110

LOCATION

