Online Short Term

Course on

Categorical Data Analysis

January 10-12, 2024

Organized by

Department of Industrial and Systems Engineering (ISE)

Indian Institute of Technology (IIT) Kharagpur

Introduction

In the era of data analytics, organizations collect and store a large amount of data. A significant proportion of such data is categorical in nature. Arriving at meaningful conclusions from categorical data requires specialized statistical tools for estimation and inference. In this three-day short term course, the participants shall be introduced to these statistical models and also on their applications to real life problem solving using popular statistical software such as R, SPSS, Minitab and EViews.

The primary objectives of the course are:

1. To enable the participants to understand the collection, description, and analysis of categorical data.

2. To enable participants to construct statistical models to describe association between explanatory variables and categorical responses.

3. To enable participants to evaluate goodness of fit of constructed models and draw inferences from constructed models.

4. To enable participants to solve practical problems using the statistical solutions obtained during modeling.

Course Contents

The course will address the following main issues/ topics:

❑ **Descriptive Analytics:** Describing categorical data, study design, sampling scheme, association measures for contingency tables.

❑ **Predictive Analytics:** Using log-linear models for contingency tables including logistic regression, multinomial logit models.

❑ **Applications:** Data analytics using categorical data from environmental, econometric, healthcare and business domains.

➢ **Lecture sessions with tabletop exercises**

➢ **Hands on training using statistical software**

➢ **Case studies**

➢ **Group discussions on the learning and its applications**

Course Schedule

10.00 am – 12.30 pm	Session I: Lectures
12.30 pm – 02.00 pm	Lunch break
02.00 pm – 05.00pm	Session II: Lectures/ Tutorials/Evaluation

Course Coordinators

❖ **Principal Coordinators:**
Prof. Anand Jacob Abraham
Prof. Balagopal G Menon

❖ **Co-coordinators:**
Prof. Biswajit Mahanty
Prof. Jhareswar Maiti
Department of Industrial and Systems Engineering (ISE), IIT Kharagpur

Eligibility

- Government Officials
- Faculty from the technical institutes
- Scientists from research laboratories
- Executives and engineers from industries
- Graduate, post graduate & research scholars
- Data Analyst
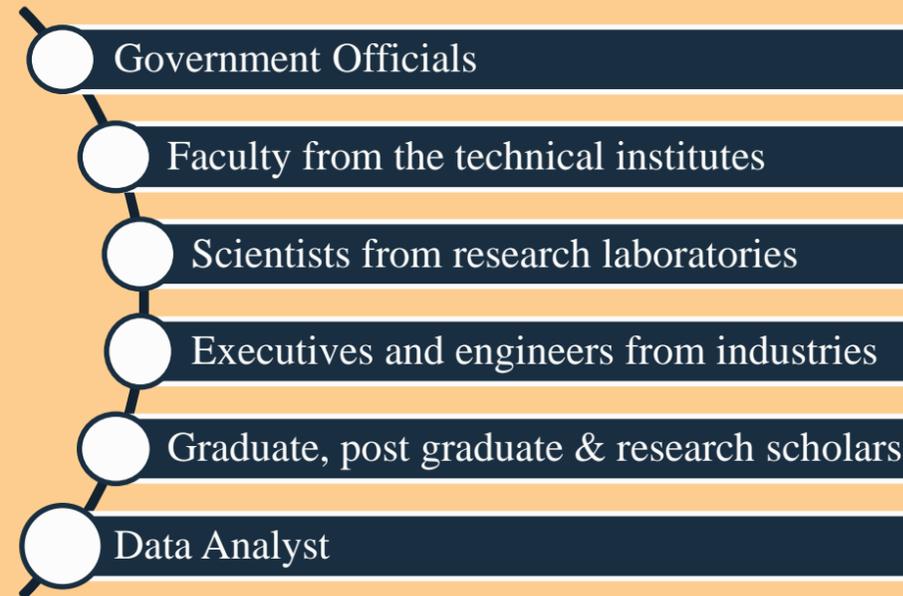
Training Methods

The training methods consist of lecture sessions with tabletop exercises, hands on training using statistical software, case studies, group discussion on the learning and its applications.

Application and Fee

The interested participants are requested to apply to the course online using the link provided below. The total number of seats is restricted to **40**. Last date of application: **January 7, 2024.** *Organization/Institute ID card would need to be submitted during application.

The fee for the three-day program is as follows:

Student - Rs 5,000.00
Faculty - Rs 10,000.00
Industry - Rs 15,000.00

*Payment as per category to be done after getting shortlisted for the program

*Payment is to be made online. The course fee includes course materials and participation fee.

Venue: Online. Link will be provided to the participants.

How to apply

Use the link: https://erp.iitkgp.ac.in/CEP/courses.htm
to apply online and the follow these steps:

Sign up → Log in → Profile fill-up → Choose the course → Apply now

Contact us

All queries regarding the course may be addressed to:

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