APPLIED DATA MINING WITH BUSINESS APPLICATIONS

Introduction
In the modern age, virtually all automated systems capture a huge amount of data either for analysis or diagnostic purposes. Traditional statistics applications focus on relatively small data sets, whereas data mining explores and analyzes very large and sometimes enormous quantities of data to discover meaningful patterns. Data mining is a set of mathematical and statistical methodologies that systematically exploits the available data and find out the pattern, information, and knowledge in supporting decision-making process. Data mining has wide applicability in operations, economics, marketing, genetics, the social and natural sciences, and business. The discussion and hands-on-session of each data mining method provide insights to model building and managerial decision making to a practical application.
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Objectives of the Program
1. Being able to think in the space of concepts, and theories for framing analytical model and generating solution for business problem
2. Participants feel comfortable applying data mining methods in business applications for a wide range of data set.
3. Computing results from multiple decision models and applies model comparison methods for determining the best model that supports organizational goals.
4. Open-source R software will be used to facilitate the participants in learning.

Pedagogy of the Program
The participants will get concepts and hands-on-experience on how to fit prediction models for real life data through online lecture, interactive discussion, illustrations, and spreadsheet-based calculation. Open-source statistical software R will be used to create graphical and numerical output for the analysis.

Indicative Content of the Program
1. Exploratory data analysis: Measuring the relationship between variables, Multivariate distance and outliers detection, Product affinity and market basket analysis, Cross-sell and Up-sell models and their applications, R code Illustration with real-life data set
2. Recommender systems: Primary structure of recommender system, Collaborative filtering approaches, Computing similarity and predicting preference rating, Content-based and hybrid recommender systems, R code illustration for collaborative filtering with large rating data
3. Non-linear classification methods and their applications: Naïve Bayes method and classification, K nearest neighbor classification method, Real-life applications of Naïve Bayes and KNN method with R code
4. Data mining applications in Insurance domain: Role of data mining in the insurance domain, Customer attrition analysis in life insurance, Detecting fraud in health insurance

Program Director: Prof. Sasadhar Bera

Fees (Per Candidate):Rs 27300+GST (Non Residential-In Campus),Rs 21000+GST(Online)

Proposed Dates:November 14 to15,16, 2020