

**Courses Schedule:**

<b>Course Name</b>	<b>Using R for Data Visualization and Analytics</b>	<b>Text Analytics</b>	<b>Predictive Analytics and Recommender Systems</b>
<b>Course Date</b>	April 12 - 14, 2018	May 17- 19, 2018	June 07 - 09, 2018
<b>Registration Closing Date</b>	March 29, 2018	May 02, 2018	May 23, 2018

**Target Audience:** Individuals, students, and professionals from government, industry, and academia working / interested in Data Science

**About C-DAC, Mumbai:** Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY), Govt of India, for carrying out R&D in IT, Electronics and associated areas. Mumbai centre of CDAC actively carries out R&D activities into various fields of Software Technology like Artificial Intelligence, Multilingual Computing, E-learning, E-governance, Free/Open Source Software, Mobile Computing, Biometrics and Accessibility etc. Knowledge Based Computer Systems (KBCS) division at CDAC Mumbai has been working on problems in the areas of Machine Translation, Transliteration, Document Classification, Information Retrieval, Information Extraction, Opinion Mining and Analytics. It has developed various software solutions in the relevant areas and has been continuously contributing to technology through publications and training programs.

**Registration Process:**  
 Registration fee per course for a candidate is as under:  
 ✎ Full-time Faculty/Student in recognized Educational Institution: ₹ 7500/- + app. taxes  
 ✎ Industrial Professional and Others: ₹ 9000/- + app. taxes  
 One can register for one or more than one courses by paying the applicable registration fees. All payments of applicable registration fees can be made either by a Demand Draft/Cheque/UPI or through NEFT. For registration and other details, please visit: <http://www.kbcs.in/datascience>.  
**Note:** Registration will be on first come first serve basis. Final participation in any of the courses will be subject to the realization of payment of applicable registration fee. Fee will cover course material including pen-drive, lunch and refreshments. Participation certificate will be issued to all participants completing the course.

**Contact Us:**  
 Centre for Development of Advanced Computing,  
 Near Bharati Vidyapeeth, Raintree Marg, Sector 7, CBD Belapur, Navi Mumbai – 400614 (MH)  
 ☎ + 91-22-2756-5303/5308 📠 +91-22-27560004  
 ✉ kbcs@cdac.in 🌐 www.kbcs.in/datascience

**SHORT TERM COURSES ON DATA SCIENCE**

We are living in a Data Age. Data is being continuously generated and consumed in various formats, and sizes from a number of varied sources. This data can be a big asset if stored, processed and analysed efficiently in real time with the help of intelligent algorithms. There is a growing interest to utilize such data for the improvement of business, health, education, society etc. There are many ways to process and analyse such data spanning techniques like data visualisation, text analytics, predictions and recommendations etc. Applications of these techniques can give companies and organisations valuable insights leading to competitive advantage, efficient service delivery and above all customer satisfaction. And also, the demand for skilled resources in these fields is growing day by day. CDAC Mumbai has successfully conducted two series of short-term courses on Data Science and Machine Learning in the years of 2016 and 2017. Continuing with that, we are announcing the 2018 series of following short-term courses in Data Science and Machine Learning.



### Using R for data visualization and analytics

This course introduces R – a language and environment for Statistical Computing and Visualization. In recent years, R has become very popular due its open source cross-platform nature, robust package repository and strong graphics capabilities. During the course, one will not only learn about basics of R, but also about the techniques of data acquisition and processing. Course will also cover in detail the features of R related to data analysis and visualisation.

**Objectives:** On completion of the course, one should be able to:

- ✍ Understand the role and use of R with respect to data analysis and visualisation.
- ✍ Understand R environment, packaging system etc.
- ✍ Apply R for data acquisition, cleaning, exploratory and statistical analysis etc.
- ✍ Document and report results of analysis using R markdown.



### Text Analytics

Text analytics plays an important role in discovering patterns and information from textual (unstructured/structured) data. The techniques for text analytics go beyond frequency count and also involve complex algorithms from Natural Language Processing (NLP) and Machine Learning.

This course aims to provide learners an understanding of the methods for text analytics. It will cover major techniques for mining and analyzing text data to discover interesting patterns, extract useful knowledge, and support decision making. The techniques will include Named Entity Recognition, Sentiment Analysis and Text Categorization among others. Learners will also be introduced to various open source utilities for developing text analytics applications.

**Objectives:** By the end of the course, learners can:

- ✍ Understand the text analytics problem
- ✍ Conduct exploratory analysis of text information
- ✍ Understand and use Natural Language Processing (NLP) techniques for text processing
- ✍ Develop an end-to-end text analytics solution



### Predictive Analytics and Recommender Systems

Today businesses can not depend only on their products or services to grow, they have to utilize and learn from historical data to better understand the end user. Predictive analytics is emerging as a strategy to achieve the same through various techniques. Predictive analytics helps improve end user experience through user action prediction and appropriate (real-time) recommendations. Predictive Analytics and Recommender Systems play a key role in many data science applications as demonstrated by applications like, Google flu trends, e-commerce portals e.g. Amazon, among others.

The course emphasizes hands-on approach for better understanding of the techniques used in the domain.

**Objectives:** On completion of this course, one should be able to:

- ✍ Understand algorithms/techniques used in predictive analytics and recommender systems
- ✍ Select appropriate tools for predictive analytics tasks
- ✍ Apply the methods covered in this course to implement solutions