

Faculty Development Programme on Data Sciences

Jointly organized by

AICTE Training And Learning (ATAL) Academy Programmes &
Data Analytics Lab, IIIT Allahabad

(8th & 12th November 2019) URL: <https://datasciences.iiita.ac.in>

Venue: Indian Institute of Information Technology, Allahabad



(An event under IIIT-A beyond 20 by 2020)

About the Programme

Data science is a multi-disciplinary area that uses scientific methods, algorithms and systems to extract hidden knowledge and insights from data (Structured and Unstructured). It is the study of where information comes from, what it represents and how it can be transformed into a valuable resource in the creation of business and IT strategies. Mining large amounts of structured and unstructured data to identify patterns can help an organization in many ways. Data Science is confluence of mathematics, statistics and computer science disciplines, and incorporates techniques like machine learning, cluster analysis, data mining and visualization. Hence, it is important to bring awareness among researchers & academicians and train manpower on datasciences to do innovative research work, projects, and create knowledge base.

Objectives of the Programme

- To disseminate the knowledge of data sciences among students, researchers and academicians.
- To provide conceptual understanding of how data sciences can be used to innovate and improve business processes.
- To create awareness and interest in this technology among students, and researchers.
- Train manpower in the field of data sciences to fulfill the growing necessity of various organizations.
- To focus on providing the researchers and students insight of overall components of data science.

About IIIT-Allahabad and Data Analytics lab

The institution was founded in 1999, and in the following year received university status and the right to award its own degrees. In 2014, the IIIT Act was passed, under which IIITA and four other Institutes of Information Technology funded by the Ministry of Human Resource Development were classed as Institutes of National Importance. Data Analytics Laboratory under Department of Information Technology, IIIT- Allahabad is established with the vision to solve the data sciences and big data related challenges faced by the individuals, Government and Non-Government organization & industries. Various research areas in the field of Data sciences is identified and research is initiated to fulfill the data analytics requirements. Data Analytics Lab is started to provide necessary infrastructure to the students of IIIT-Allahabad to carry out their research in the field of data sciences.

Registration Process

Interested candidates can register on or before 31st October 2019 through the registration link at: <https://datascience.iiita.ac.in/registration.php> [or] directly provide candidate details at: <https://forms.gle/7MBKwcZM79atxfYT6>

Participants

Academicians, Students, and Researchers, who are interested in Data analytics can participate in the event.

Speakers

Experts from IIT - Patna, MNNIT - Allahabad, VIT - Chennai, SHUATS - Allahabad, and IIIT - Allahabad

Topics to be Covered

- Concept of Data Sciences
- Probability Theory
- Statistics (Hypothesis and Inference)
- Big Data Algorithms
- Visualization of Data
- Linear Algebra (Vectors and Matrices)
- Machine Learning-Introduction
- Classification and Regression
- Introduction to Data Security
- Overview of Deep Learning
- Lab and Hands-on on the Hadoop, Python and Data visualization.

Co-Ordinators

Patron: Prof. P. Nagabhushan
Chair: Prof. Shekhar Verma
Co-ordinator : Dr. Manish Kumar

Correspondence

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Name of the Institute/Organization: **Indian Institute of Information Technology, Allahabad**

Title of the Workshop (Any one Thrust Areas or other areas): **Data Sciences**

Duration: **08/11/2019 to 12/11/2019**

Schedule Plan (Tentative)

Dates	10:00 AM to 11:30 AM	11:30 AM to 12.00 PM	12.00 PM to 1.30 PM	1.30 PM to 2:30 PM	2:30 PM to 4.00 PM	4:15 PM to 4:45 PM
08/11/2019	Registration and Inauguration	High Tea	Session - 1 Concept of Data Science	Lunch	Session - 2 Probability Theory and Probabilistic Learning	Tea
09/11/2019	Session - 3 Statistics (Hypothesis and Inference)	Tea	Session - 4 Big Data Analytics and Algorithms	Lunch	Session - 5 Lab Session on Map Reduce/Hadoop	Tea
10/11/2019	Session - 6 Linear Algebra (Vectors and Matrices)	Tea	Session - 7 Data Visualization	Lunch	Session - 8 Lab Session	Tea
11/11/2019	Session - 9 Machine Learning- Introduction	Tea	Session - 10 Machine Learning (Classification and Regression)	Lunch	Session - 11 Lab on Python Programming (Classification Algorithms)	Tea
12/11/2019	Session -12 Overview of Deep Learning	Tea	Session - 13 Data Compression	Lunch	Session - 14 Introduction to Data Security	Valediction