

ORGANIZING COMMITTEE

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- ❑ Sri. Praveen D Reddy, Chairman, CBES.
- ❑ Sri. J Pratap Reddy, Secretary, CBES.

PATRONS

- ❑ Prof. G ChandraMohan Reddy, Principal, MGIT.
- ❑ Prof. K Sudhakar Reddy, Vice Principal & HoD MEC, MGIT.

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- ❑ Prof. D. Vijaya Lakshmi, Head, Dept. of IT, MGIT.
- ❑ Prof. C.R.K. Reddy, Head, Dept. of CSE, MGIT.
- ❑ Prof. M. Rama Bai, Head, Dept. of ET, MGIT.

CO- CONVENOR

- ❑ Prof. M. Rudra Kumar, Professor, Dept. of IT, MGIT.

COORDINATOR

- ❑ Ms. B Meenakshi, Asst. Professor, Dept. of IT, MGIT.
- ❑ Mr. Bapanapalli Lokesh, Asst. Professor, Dept. of IT, MGIT.
- ❑ Ms. Chinnakka Sudha, Asst. Professor, Dept. of IT, MGIT.
- ❑ Ms. V Veena, Asst. Professor, Dept. of IT, MGIT.

ORGANIZING COMMITTEE MEMBERS

- ❑ Mr. B. Tulasi Dasu, Asst. Professor, Dept. of IT.
- ❑ Ms. A Amulya, Asst. Professor, Dept. of IT.



MAHATMA GANDHI
INSTITUTE OF TECHNOLOGY (Autonomous)
Kokapet(Village), Gandipet, Hyderabad, Telangana – 500075. www.mgit.ac.in

MOTIVATE **27**
INNOVATE
EMPOWER YEARS

5-Day National Level Faculty Development Programme (FDP)

On

DATA SCIENCE using R Programming

6th - 10th August 2024
Timing: 9:30 AM to 4:00 PM

Organized by

**Department of Information
Technology, Computer Science &
Engineering, and Emerging
Technology**

RESOURCE PERSON

C. Soundaryaveni

Senior Technology Specialist, QuantumNique
Solutions.

ADDRESS FOR CORRESPONDENCE

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY

(Estd in 1997)

CHAITANYA BHARATHI EDUCATIONAL SOCIETY Permanently
affiliated to JNTUH & Eight UG Programs Accredited by NBA;
Accredited by NAAC with 'A++' Grade Gandipet, Hyderabad -
500075

website: www.mgit.ac.in

Contact Details:

Email:- mrudrakumar_it@mgit.ac.in

blokesht_it@mgit.ac.in

Mobile:- 8142781437, 8019923406.

FORSEEING THE FUTURE
TO SHAPE PIONEERS
OF TOMORROW



ABOUT THE INSTITUTE

□ Mahatma Gandhi Institute of Technology (MGIT) has experienced rapid growth since its establishment in 1997 by the Chaitanya Bharathi Educational Society (CBES) in the serene and tranquil surroundings of Gandipet, Hyderabad. The institute is accredited by NAAC with A++ grade for a period of 5 years w.e.f 23rd Nov 2023. MGIT has obtained academic Autonomous status by UGC for 10 years from the academic year 2021-22 and all the Departments of the Institute have been accredited by NBA, New Delhi. The Institute has been consistently ranked among the top 10 Engineering Colleges in Telangana State. In its two decades and more of its evolution, all the stake holders of the Institute, relentlessly endeavoured to position MGIT as a Leader and an Innovator in the ecosystem of technical education. The Institute has established excellent Infrastructure such as state-of-the art laboratories, spacious library with a collection of printed and digital books & journals, sports & hostel facilities along with Infrastructure for extra and co-curricular engagements, in pursuit of academic excellence. MGIT has scaled greater heights both Nationally & Internationally and made its mark in Industry and in academia.

ABOUT THE DEPARTMENT

- The Department of Information Technology at MGIT was established in 1997 with an annual intake of 60 students. It has 18 qualified faculty members, including two professors, one associate professor, and fifteen assistant professors, supported by experienced non-teaching staff. Currently, the department has four Ph.D. holders and nine faculty members pursuing their Ph.D.
- The department boasts well-equipped independent laboratories, providing facilities for students to learn emerging technologies such as Data Analytics, Data Mining, IoT, AI, Machine Learning, and Open-Source Technologies. Faculty members are engaged in AICTE-sanctioned research projects. Students participate in various clubs and professional chapters like ASME, ISTE, IEEE, and the Innovation Club, showcasing their skills through product development and organizing workshops, seminars, and conferences. Our graduates are highly sought after by employers due to our hands-on curriculum, excellent labs, and strong industry connections.

ABOUT THE FDP:

- The Faculty Development Program (FDP) on Data Science using R is an intensive four-day event designed to provide educators and professionals with a comprehensive understanding of essential topics in data science, including R programming, data visualization, and machine learning techniques. Each day focuses on a specific area, ensuring a thorough exploration of key concepts and practical applications.
- This FDP aims to equip participants with the knowledge and hands-on skills needed to excel in the field of data science, fostering innovation and best practices in this rapidly evolving discipline. Participants will gain valuable insights into solving real-world problems, enhancing their teaching and research capabilities, and staying current with the latest advancements in data science and R programming.

COURSE OBJECTIVES:

- **Understanding R Programming Language:** Participants will develop a solid foundation in R, a versatile tool for data analysis and visualization.
- **Solving Data Science Problems:** The program offers practical experience in addressing real-world data science challenges.
- **Classification and Regression Models:** Attendees will gain insights into the principles and applications of these essential machine learning techniques.

COURSE OUTCOMES:

Upon completing this program, participants will:

- Be proficient in using various data structures and manipulating data with Pandas.
- Create static, animated, and interactive visualizations using Matplotlib.
- Understand and implement machine learning algorithms.
- Apply appropriate datasets to machine learning algorithms to solve real-world problems.

BENEFITS:

Participating in the Faculty Development Program (FDP) on Data Science using R offers numerous benefits for educators and professionals, including:

Enhanced Teaching Capabilities:

- Gain in-depth knowledge of data science concepts and R programming, enabling you to enrich your curriculum and offer students a cutting-edge education.

Practical Skills Development:

- Acquire hands-on experience in data analysis, visualization, and machine learning techniques, equipping you with practical skills applicable in both academic and industry settings.

Research Opportunities:

- Explore new research avenues in data science and machine learning, with access to advanced tools and methodologies that can contribute to impactful research projects.

Professional Growth:

- Stay updated with the latest trends and technological advancements in data science, enhancing your professional credentials and career prospects.

Networking and Collaboration:

- Connect with peers, experts, and industry professionals, fostering opportunities for collaboration, joint research, and professional partnerships.

Innovative Problem Solving:

- Learn how to apply data science techniques to solve real-world problems, making your teaching and research more relevant and impactful.

Certification:

- Receive a certificate of participation, recognizing your commitment to professional development and your expertise in data science using R.

This FDP is an excellent opportunity to advance your knowledge, skills, and career in the dynamic field of data science.

PROGRAM SCHEDULE

Day 1 (06/08/2024)

1. Introduction to Fundamentals

- Introduction to Data Science & R Programming.
- Explanatory Data Analysis (EDA).
- Probability and Statistics for Data Science.
- Decision Tree.

Day 2 (07/08/2024)

2. Supervised Learning Techniques in R

- K-Nearest Neighbors.
- Regression Model for Prediction.
- Data Visualization using R.
- Classification Model.

Day 3 (08/08/2024)

3. Unsupervised Learning Techniques

- Clustering Model.
- Deep Learning with TensorFlow and Keras in R.
- Regression Model.

Day 4 (09/08/2024)

4. Practical Implementation and Conclusion

- Case Studies and Real-world Applications
- Building and Evaluating Models

Day 5 (10/08/2024)

5. Advanced Topics and Online Test

Datasets Used:

- Visualizations: Iris dataset
- Regression: Admission_Predict dataset
- Classification: Titanic dataset



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DATA SCIENCE USING R PROGRAMMING

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Organized by

Department of Information Technology, Computer Science & Engineering, and Emerging Technology

Eligibility & Registration:

- No Registration Fee
- Who Can Participate: Faculty, Industry, and Ph.D. scholars from AICTE-approved technical institutions.

Mode of Conduction: Offline Mode

Certification:

- Certificate and Material will be provided to all participants who are attending ALL FDP sessions.

Registration Link:

<https://forms.gle/DQjmLygp1fZ3yZd67>

or

