



**All India Council for Technical Education (AICTE)  
and  
JIO Institute**

**Joint Faculty Development Programme**

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**Topic - Artificial Intelligence & Data Science:  
Perspectives, Pedagogy and Practices**

**Aug 21- Aug 25, 2023  
Jio Institute, Ulwe, Navi Mumbai**

## Setting the Context

Artificial intelligence (AI) and Data Science (DS) have been making waves in almost every industry. Self-driving cars, text-to-speech systems, article generators, intelligent cameras, chatbots, and medical imaging are just a few examples of the growing trends in AI & DS. The current application of AI in data science is accelerating the development of highly accurate models for predicting outcomes and patterns in data, as well as automation and machine learning. These programmes are already being used in Science, Engineering, Healthcare and Liberal Arts etc.

In Industry, with the sophisticated combination of computing power, intelligent algorithms, machine learning, and data analysis, businesses are improving, and scientific research is advancing. Together, AI and data science are automating a significant amount of production and development for enterprises, substantially accelerating, and improving human-machine interactions. New-age tech is also expected to impact the employment prospects for several industry segments, new job roles may emerge, emerging job roles may require up-skilling & re-skilling.

In education, faculty members, teaching assistants, students, counsellors, and administrative staff have access to intelligent tutors in the form of Generative AI and ChatBot. Despite the enormous opportunities that AI might afford to support teaching and learning, we have to debate the ethical implications and related risks as well.

While AI & DS are powering the disrupting shift in Industry and Academia, it is critical for stakeholders- *Education Leaders, Faculty Members and Students*- to develop a cohesive ecosystem of teaching-learning practices to meet the growing challenges. The proposed 5 day program will help participants to develop a deeper understanding on following areas:

*(expected outcomes)*

- Demystifying AI & DS and their various facets
- Impact of AI&DS in key sectors like Science & Engineering, Healthcare & Liberal Arts etc
- Emerging opportunities in Semiconductor Industry
- Integrating new pedagogies and curriculum modifications
- Student engagement projects
- Industry best practices *(through exposure visits)*

## Programme Structure

**5 Day Faculty Development Programme with the following structure:**

**Sunday, August 20:** Arrival and Check-in of all 40 Participants.

Day & Date	Programme/Engagement Details
Monday, August 21	10:00 AM- 10:45 AM: Registration
	10:45 AM: Assemble in the Programme Hall
	11:00 AM- 12:00 PM: Inaugural Session <ul style="list-style-type: none"> <li>- Lighting the Lamp</li> <li>- Welcome Address</li> <li>- Inaugural Address by Prof TG Sitharam, Chairman, AICTE</li> <li>- Vote of Thanks</li> <li>- Group Photograph</li> </ul>
	12:00 PM- 1:30 PM Session-1: Introduction to AI and an overview of applications across sectors
	1:30 PM- 2:15 Lunch Break
	2:15 PM- 3:45 PM Session-2: Applications of AI in Science & Engineering & Healthcare
	3:45 PM- 4:15 PM Tea Break
	4:15 PM- 6:00 PM Session-3: Discussion on Students led Projects in AI & DS
	6:00 PM Campus Tour and End of Day One
Tuesday, August 22	9:00 AM- 10:30 AM Session-4: Big Data & Cloud
	10:30 AM- 10:45 AM Tea Break
	10:45 AM- 12:15 PM Session-5: Natural Language Processing
	12:15- 1:30 PM Session-6: Natural Language Processing
	1:30 PM- 2:15 PM Lunch Break
	2:15 PM- 3:45 PM Session-7: Group Reflection on Curriculum
	3:45 PM- 4:15 PM Tea Break
	4:15 PM- 6:00 PM Session-8: Reflection & Presentation by Groups on Curriculum
Wednesday, August 23	9:00 AM- 10:30 AM Session-9: Time Series & Optimization

	10:30 AM- 10:45 AM Tea Break
	10:45 AM- 12:15 PM Session-10: Time Series & Optimization
	12:15 PM- 1:30 PM Session-11: AI , DS and Personalized Therapeutics: The NEP Context
	1:30 PM- 2:15 PM Lunch Break
	2:15 PM- 3:45 PM Session- 12: Reflection in Groups on Curriculum
	3:45 PM- 4:15 PM Tea Break
	4:15 PM- 6:00 PM Session-13: Reflection & Presentation by Groups on Curriculum
	7:00- 9:00 PM Jio Institute Dinner
Thursday, August 24	9:00 AM- 10:30 AM Session-14: AI and Big Data in Semiconductors
	10:30 AM- 10:45 AM Tea Break
	10:45 AM- 12:15 PM Session 15: Responsible AI
	12:15 PM- 1:30 PM Session 16: AI and DS Projects at Reliance
	1:30 PM- 2:15 PM Lunch Break
	2.30 pm to 6 pm: Industry Visit: Reliance Corporate Park
Friday, August 25	9:00 AM- 10:30 AM Session-17: Reflection on the Program and Presentations on Curriculum and Student Project Possibilities
	10:30 AM- 10:45 AM Tea Break
	10:45 AM to 12.30 PM: Certificate Distribution, Valedictory Address and Group Photograph
	12:30 PM to 1:30 PM Lunch Break
	1.30 PM to 6 PM: Visit to Nita Mukesh Ambani Cultural Centre and a few Heritage Sites in South Mumbai with a discussion on AI Applications in Arts and Heritage

## List of Key Facilitators

- **Dr Shailesh Kumar**  
Programme Mentor, Artificial Intelligence & Data Science, Jio Institute, Chief Data Scientist, Center of Excellence in AI/ML, Reliance Jio  
Profile: <https://www.jioinstitute.edu.in/faculty/dr-shailesh-kumar>
  - **Dr. Larry Birnbaum**  
Programme Mentor, Artificial Intelligence & Data Science, Jio Institute  
Professor, Computer Science, Northwestern University, USA  
Profile: <https://www.jioinstitute.edu.in/faculty/dr-larry-birnbaum>
  - **Dr. Varun Aggarwala**  
Assistant Professor, Jio Institute  
Profile: <https://www.jioinstitute.edu.in/faculty/dr-varun-aggarwala>
  - **Dr Samik Mukherjee**  
Assistant Professor, Jio Institute  
Profile: <https://www.jioinstitute.edu.in/dr-samik-mukherjee>
  - **Mr Amit Sinha**  
AVP, Information Technology, Jio Platforms  
Profile: <https://library.jioinstitute.edu.in/about-us/our-team>
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