

## The programme is perfect for

- Faculties, Research Scholars, Industry Professionals, Graduates, and Undergraduates
- Working Professionals with 1+ years of experience in IT, software, analytics, engineering, or related domains
- Aspiring AI Professionals looking to enter or upskill in Artificial Intelligence (AI), Machine Learning (ML), Deep Learning, and Data Science

## Assignments / Case-Projects

- Sentiment Analysis using Logistic Regression
- Comparative performance: Decision Trees vs Random Forest vs XGBoost to identify and reduce customer attrition
- Image Classification with SVM (FashionMNIST)
- Build Neural Networks from scratch
- CNN interpretability using Grad-CAM
- Image & video captioning with LSTMs
- Variational Autoencoder on MNIST
- GAN development for synthetic image generation

## Selection Criteria

Screening the Participants Profile based on the following criteria:

- Selection based on assessment of the profile through data provided in application form
- Statement of Purpose will form an integral and important part of the selection process

### Google Form Link -

<https://forms.gle/m4bAQ7SEgDvFWfWA9>

## Program Eligibility

Faculties, Research Scholars, Industry Professionals, Graduates, and Undergraduates

## Registration Fee

Faculties, Research Scholars, and Industry Professionals: ₹4,000/-  
Graduate and Undergraduate Students: ₹2,000/-

## Resource Persons

Eminent Faculty members from DTU and Industries

### Program Convener

**Prof. S. Indu**  
(Dean, DE)

### Program Coordinators

**Dr. Trasha Gupta**  
and  
**Dr. Payal**

Duration - 50 hours

15<sup>th</sup> -31<sup>st</sup> July, 2026 (3:00-7:00 PM)

(4 hours per day, except for Sunday)

Mode - Online

Last Date for Registration: **12<sup>th</sup> July, 2026**

## Payment Related Details:

Name - Digital Education, DTU  
Account No - 44818976259  
IFSC - SBIN0010446



# Faculty Development Program in Data Science



**AI Made Simple -**  
*For persons new to  
AI and want to use it  
with confidence*

**Master AI fundamentals and  
Advanced Techniques**

**Organized by**

**Centre for Technology Enhanced Learning  
Digital Education  
Delhi Technological University**

(Formerly Delhi College of Engineering)  
Shahbad Daultpur, Main Bawana Road, Delhi - 42, India  
Website - <https://www.dtu.ac.in/>

## About DTU

Delhi Technological University (earlier Delhi College of Engineering -DCE) was established in 1941 as the Delhi Polytechnic and was established as a University by the Act of the Legislative Assembly of the Govt of GNCTD, in 2009. It has been known over the last eight decades, as a leading institution in Engineering and technology, primarily but has a long and illustrious history in imparting education as a premier institution in other streams such as IT, Management, Design and even in Architecture. Alumni from DCE/DTU have played a major role in many spheres such as public administration, corporate leadership and indeed in shaping the economy through technological and business endeavors, from computing to fintech. At present it has 17 Departments in various disciplines of technology ranging from Computer Science, IT, Biotech, Mechanical and Electrical, to Design, Management and Humanities. It is engaging in various initiatives especially in reaching out to society at large, not only in terms of more inclusive education, but finding solutions to societal problems through technology and management expertise, through its new Center which is focused on policy and community development. As part of these new initiatives for helping build capacity, and contribute to the development of the society and the economy, DTU is now expanding its footprint in the executive education space, and in line with the NEP 2020, in the digital education space.



## About Digital Education

In alignment with the National Education Policy (NEP) 2020, Delhi Technological University (DTU) has operationalized the Digital Education Vertical through the establishment of the

- Centre for Technology Enhanced Learning (CTEL)
- DTU EDGE

The objective of the center aligns with Sustainable Development Goals (SDGs), on “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. The centre serves as a nodal unit for promoting technology-enabled, blended, online, certificate, executive, and industry-aligned programs, thereby expanding access, flexibility, employability, and lifelong learning opportunities.

## About Course

The Faculty Development Program in Data Science is a comprehensive program that provides participants with a foundational understanding of artificial intelligence, AI tools, algorithms, and their industrial applications. The course will equip participants with the knowledge and practical skills necessary to proficiently apply machine learning techniques to tackle complex problems across diverse domains such as sales and marketing, medical diagnostics, to sports analytics. The course is thoughtfully crafted with a fine balance between theory and practice, with a special focus on learners from non-CS backgrounds. Contemporary industry case studies and practice sessions have been curated to provide hands-on experience of applying advanced machine learning techniques, that are used by leading tech and non-tech companies (e.g., Google, Amazon, Coca-Cola, Flipkart, Think Tanks, Civil and Mechanical Engineering firms, Power companies, Government agencies, etc.).

## The course will cover following Contents :

**Module 1:** AI Literacy & Industry Context

**Module 2:** Python & Data Thinking for AI

**Module 3:** Mathematical Foundations for AI/ML

**Module 4:** Regression Methods and Classification Methods

**Module 5:** Deep Learning and Advanced AI Techniques

- The participants will be motivated to do a self-paced Capstone Project
- **Program Evaluation Methodology** - Weekly MCQ based Evaluation (2 quizzes, each of 50 marks)
- Certificate from DTU, an Institute of Eminence

## Certification Criteria –

- Minimum 75% marks in each quiz
- 80% attendance

## Program Highlights

- Solid mathematical grounding
- Hands-on coding and real-world cases
- Advanced Model-building Sessions
- Immersion with faculty and industry Leaders
- Covers latest topics such

## Key Learning Outcomes

- Understand and apply machine learning tools, algorithms, and their industrial applications
- Build and deploy ML models for classification, regression, clustering & more
- Implement neural networks, CNNs, RNNs, LSTMs from scratch
- Work with advanced techniques like Generative AI, GANs, VAEs, and GNNs
- Apply AI solutions to real-world cases across healthcare, e-commerce, finance, manufacturing, and beyond
- Evaluate, optimize, and compare multiple ML approaches
- Design AI systems end-to-end using Python, TensorFlow, PyTorch & other industry libraries