



eict
IIT Roorkee

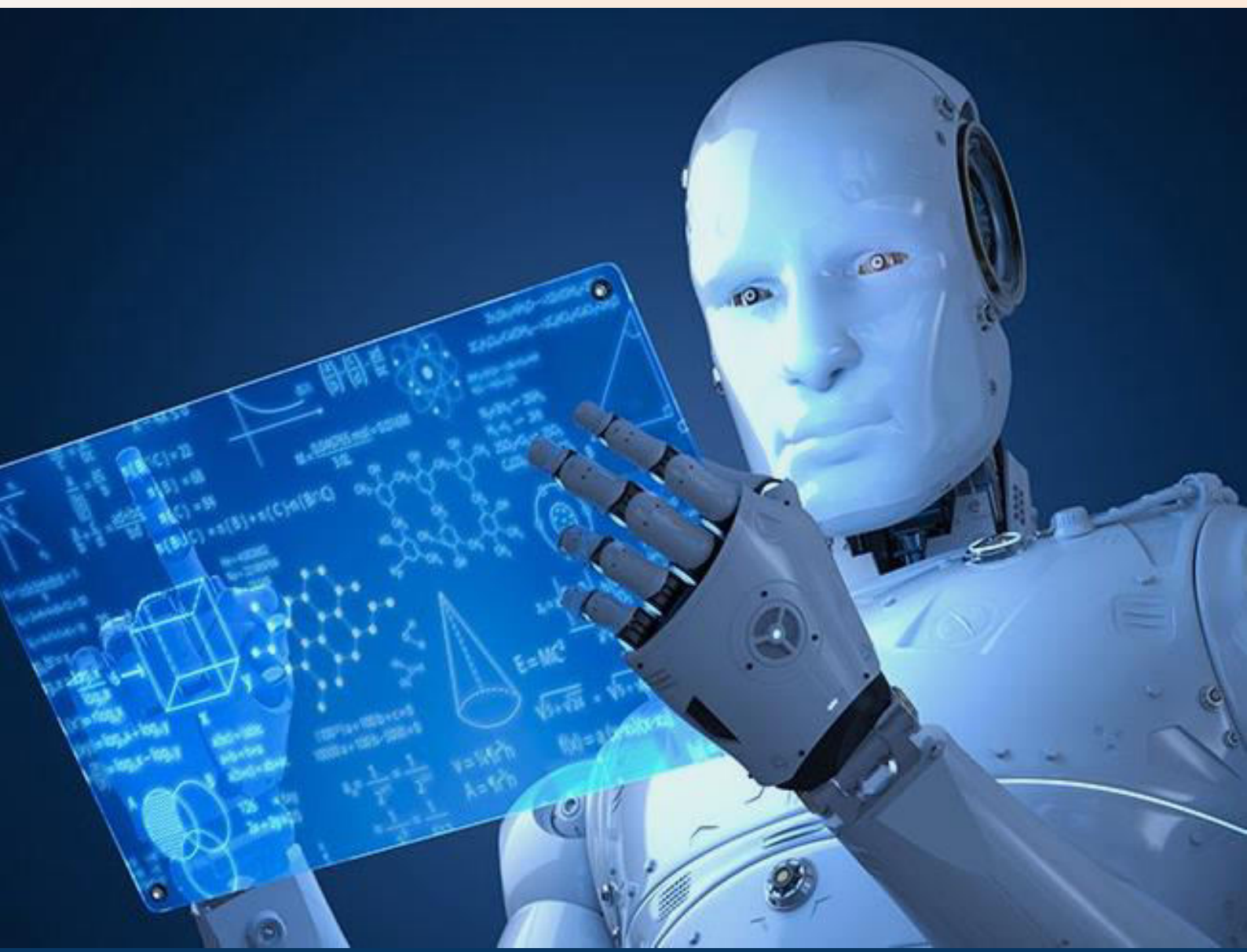


E&ICT Academy, IIT Roorkee

Internship Certification Program

By E&ICT Academy, IIT Roorkee

Applied Data Science and Machine Learning



Why Choose Data Science and Machine Learning for Your Career?

In today's evolving business environment, data has been crowned the universal currency. Competitive advantage is now also synonymous with how organizations can gather, analyze and assimilate learnings from data. Thousands of companies need team members who can transform data sets into strategic forecasts. Acquire in-demand Data Science and Machine Learning skills and meet that need.

As per the Google & MIT Technology Review study, 'Machine Learning: The New Proving Ground for Competitive Advantage', 60% of organizations are at varying stages of machine learning adoption, with nearly half (45%) saying the technology has led to more extensive data analysis & insights.

Data Science salary is quite lucrative and that is why many young IT aspirants are choosing data science as their career option.



About IIT Roorkee



Indian Institute of Technology - Roorkee is among the foremost institutes of national importance in higher technological education and in engineering, basic and applied research. The Institute ranks amongst the best technological institutions in the world and has contributed to all sectors of technological development. It has also been considered a trend-setter in the area of education and research in the field of science, technology, and engineering.

About E&ICT Academy

Electronics & ICT Academy IIT Roorkee (E&ICT IITR) is an initiative supported by MeitY, Govt of India. EICT IIT Roorkee delivers FDPs and certification courses in online as well as offline mode. Our courses lay emphasis on bridging the gap between industry demand and academic approach to learning and provide a foundation to build your career in the industries related to the ICT sector. All our courses have projects with real-life problems to give industry insights into learning. We have assimilated academic as well as industry experts to formulate the most effective courses that help professionals, students and faculty to upgrade their skills without disrupting their regular schedule.

Achievements



In Engineering
Category of NIRF
Rankings 2020



In Overall Category of
NIRF Rankings 2020



Among the IITs in the
'Citations per Faculty'
parameter in QS World
University Rankings, 2021



Best university in India
by the Times Higher
Education (THE) World
University Rankings 2019

Who Is This Program For?



Students

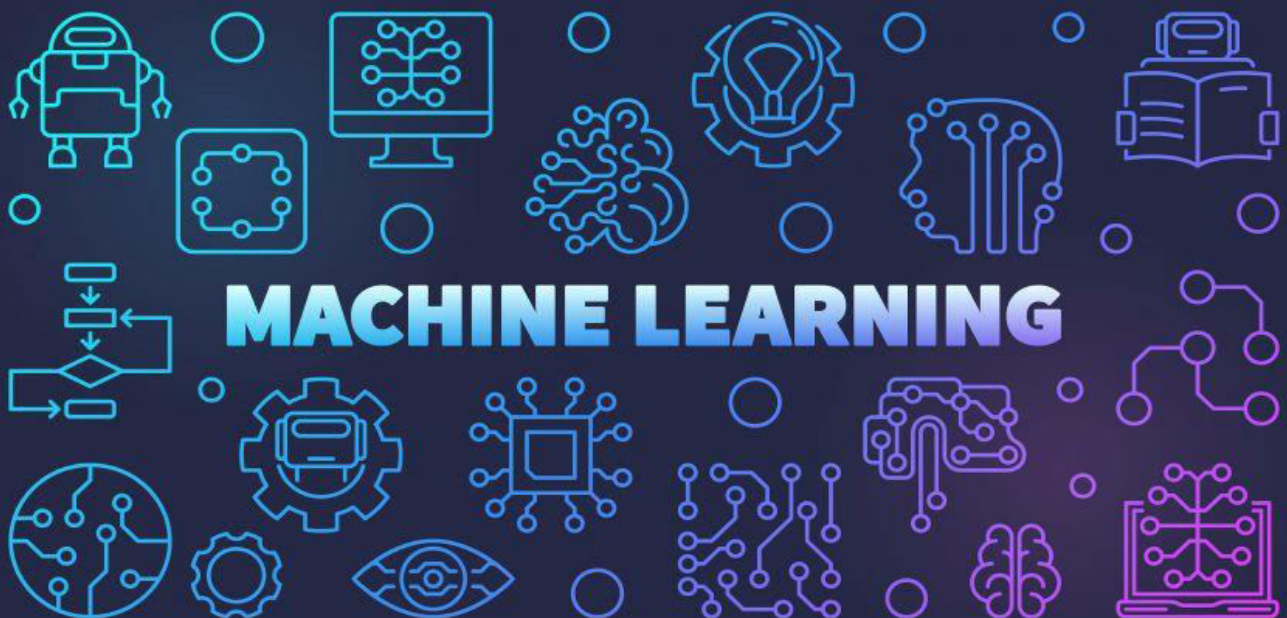


Professional



PassOut

Designed for Students/ Working Professionals, Fresh Graduates, Self-starters, Career transformers with essential work experience, wishing to switch tracks into data science



Program Highlights



Live Instructor-Led Sessions



Code Reviews by Experts



Hands-on Live Projects



One-on-One with Industry Mentors



Hands-on Learning



Personalized Feedback on Assignments



Fundamentals to Advanced



Value added soft skills sessions



Assignments and Multiple-Choice Questions



Ask Expert Anything Sessions

Program Offerings

Class Content

- Content Co-created with Industry
- Real-world project
- Project reviews
- Project feedback from Expert

Student Services

- Technical mentor support
- Student community



Eligibility cum Scholarship Test

The aim of this scholarship is to offer support to aspirants. Test will be MCQ based. Selection will be based on the online test performance of the participants.

Scholarship Discount/Benefits:

Top 5 aspirants achieving eligible score will be provided scholarship discounts for program.



SCHOLARSHIP CUM ELIGIBILITY TEST APPLIED DATA SCIENCE AND MACHINE LEARNING

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Post Training Assistance

- Career Guidance Opportunities
- Long Term Internship Opportunity
- Long Term Mentorship
- Projects Support



Career Guidance Opportunities



Long Term Internship Opportunity



Long Term Mentorship



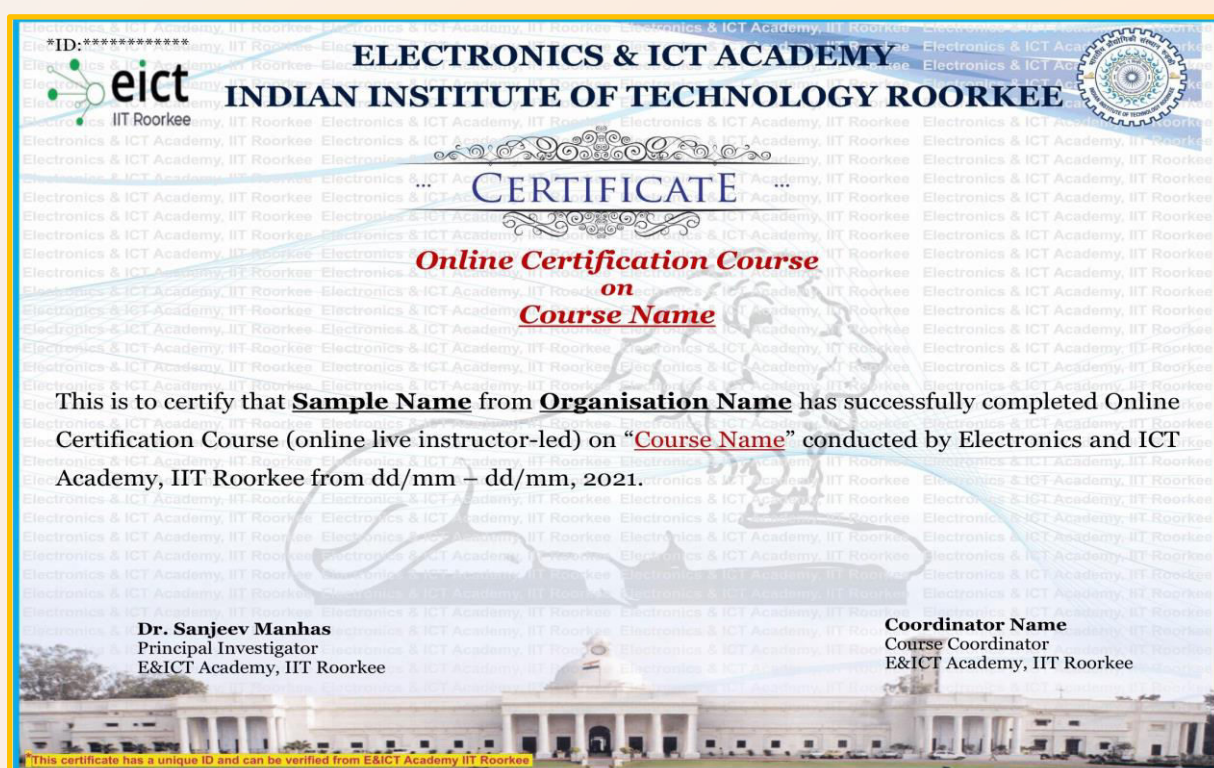
Projects Support

Program Benefits

- ❑ **45 Days Internship Certificate from E&ICT, IIT Roorkee**
- ❑ **Project Mentorship by IIT Roorkee Faculties & Research Scholars**
- ❑ **Project Guidance & Doubt Clearing Sessions by Industry Expert**
- ❑ **Expert Career Guidance from the Experts and Mentors**
- ❑ **Case Study and Project Driven Learning Methodology**
- ❑ **Access to Learning Material and Video Lectures**
- ❑ **Eligibility cum Scholarship Test with Scholarship Discount**
- ❑ **Award Distribution for Performances/Achievements in Program**

Certification

- All successful participants will be provided with a certificate of completion by E&ICT Academy, IIT Roorkee.
- Students who do not complete the course / leave it midway will not be awarded any certificate.



Faculties and Course Advisors



Prof. Sanjeev Manhas

E&ICT Academy, IIT Roorkee

Principal Investigator

[Know More](#)



Prof. R. Balasubramanian

Department of CSE, IIT Roorkee

Expert from Academia

[Know More](#)



Kaushalendra Singh Sisodia

Director at Uniconverge Technologies, IIT

Kanpur Alumni

Program Advisor

[Know More](#)



Prof. Sanjay Aggarwal

Uniconverge Technologies Pvt. Ltd

Expert from Industry

[Know More](#)

Program Content

Data Science

❑ Data Science Foundation

- Introduction To Data Science
- Industry Applications
- Terminologies

❑ Python Essentials

- Anaconda - Python Distribution Installation And Setup
- Jupyter Notebook
- Python Basics
- Data Structures
- Control Statements

❑ R Language Essentials

- R Installation And Setup
- R Studio Basics
- R Data Structures
- Control Statements
- Data Science Packages

❑ Maths For Data Science

- Essential Mathematics
- Linear Algebra
- Linear Transformation
- Types Of Matrices, Matrix Properties, And Operations Probability And Calculus

Program Content

❑ **Statistics For Data Science**

- Statistics Introduction
- Terminologies
- Inferential Statistics
- Harnessing Data
- Exploratory Analysis
- Distributions
- Central Limit Theorem
- Hypothesis Testing
- Correlation, And Regression

❑ **Data Preparation With Pandas**

- Numpy Array Functions
- Data Munging With Pandas
- Imputation
- Outlier Analysis

❑ **Visualization With Python**

- Visualization Basics
- Matplotlib Introduction
- Basic Plots
- Customizing Plots
- Sub-Plots
- Statistical Plots
- Seaborn Package Introduction

Program Content

❑ Machine Learning Associate

- Machine Learning Introduction
- ML Core Concepts
- Unsupervised And Supervised Learning
- Clustering With K-Means
- Linear Regression
- Logistic Regression
- K-Nearest Neighbor

❑ Advanced Machine Learning

- Bayes Theorem
- Naïve Bayes Algorithm For Text Classification,
- Decision Tree
- Ensemble Methods: Random Forest,
- Extra Trees
- Svm, Boosting Techniques
- Xgboost
- Artificial Neural Network
- Adv Metrics
- Imbalanced Dataset
- Grid Search
- K-Fold Cross-Validation

Program Content

❑ **Sql For Data Science**

- Relational Database Management Systems Basics
- Sql Introduction
- Connection To Sql Databases
- Fetching Data With Select
- Where Condition
- Sql Joins
- Sql Crud Operations

❑ **Deep Learning – Cnn Basics**

- Deep Learning Introduction
- Tensorflow And Keras
- Convolution Neural Network Basics
- End To End Image Classification Of Cats And Dogs Using The Tensorflow-Keras Platform

❑ **Tableau Associate**

- Visual Analytics Basics
- Tableau Introduction
- Connecting To Datasource
- Dimensions Vs Measures
- Basic Plots
- Compound Plots
- Forecasting
- Publishing

Program Content

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❑ **Big Data Foundation**

- Introduction to Big Data

Test & Evaluation

The assessment for the theory & practical part is based on a knowledge bank of questions created by field experts and approved by E&ICT Academy.

To pass the qualification, every trainee should score a minimum of 50% cumulatively (Theory and Practical).

Assessment Comprises the Following Components:

- ☐ **Attendance and Punctuality Report**
- ☐ **Weekly Assignments (Theory - Hands-On)**
- ☐ **Weekly Tests (Basic-Advanced)**
- ☐ **Project**

- Synopsis Process Report
- Complete Project Report

Award Distribution for Performances/Achievements

Top 5 performers throughout the program will be acknowledged with various rewards



Tools and Technologies



Skills Covered In Program



Job opportunities in DS and ML

Data Scientists are needed for businesses in every Industry. Even fortune companies as Google, Amazon, Apple, Facebook, Microsoft need data science experts who have in-depth knowledge of data extraction, data mining, visualization, etc. Some of the leading data science careers are,



Business Intelligence Developer



Applications Architect



Industry Architect



Enterprise Architect



Data Scientist



Data Architect



Data Analyst



Data Engineer

Course Details and Fees

Please find more information about the program and fees here:

Program	Phase	Duration	Program Fees	Total Fees
Applied Data Science and Machine Learning	Internship	45 Days (50+Hrs)	22,000 INR	22,000 INR

Contact us at +91-8595486148, +91-9149130233

For Further Information Connect to

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Frequently Asked Questions

1. Who is organizing this program?

This is a program officially being organized by E&ICT Academy, IIT Roorkee.

2. What are the prerequisites to attend these training programs?

This program does not require any prerequisites. You will be taught everything from scratch including programming in python.

3. Which certificate will I get?

All successful participants will be provided with an Internship Certificate of Completion by E&ICT Academy, IIT Roorkee.

4. When will I receive confirmation of registration?

You will receive a Call confirmation within 24 hours & an Email confirming your seat after your payment is verified at our backend after last date of registration.

5. What are the benefits of Eligibility cum Scholarship Test?

The aim of this scholarship is to offer support to aspirants. Test will be MCQ based. Selection will be based on the online test performance of the participants.

Top 5 aspirants achieving eligible score will be provided scholarship discounts for program.

6. Explain about Award Distribution for Performances/Achievements?

Top 5 performers throughout the program will be acknowledged with various rewards.

7. What is Support Learning Mechanism of Program?

Live Instructor-Led Sessions

24X7 Access Study Materials (Session Videos, PDFs, PPTs)

Weekly Expert Talks About Use Cases

Online Practice Tests

Weekly Practice Exercises and Assignments

Module Based Projects

Mentorship

Career Guidance and Opportunities