



Certification Course on Data Analytics & Generative AI

Unravel the Secrets of data and become an expert in the field of Data Analytics & Data Science with this EICT IIT Guwahati's program



About the Program

Embark on a transformative journey into the cutting-edge field of Data Analytics and Generative AI, brought to you by the prestigious EICT IIT Guwahati and Devarty. This comprehensive program has been meticulously designed to equip you with the tools and expertise needed to navigate the emerging landscape of data-driven innovation.

This program is planned to provide you with a deep understanding of data analysis techniques, statistical modelling, and predictive analytics. Delve into the world of data visualization, AI concepts and workflows, Generative AI, machine learning, and AI to extract meaningful patterns from complex datasets. This program approach includes live sessions by industry leaders, and hands-on projects. The program's live session nurtures a high-engagement learning environment, enabling you to tackle real-world data challenges with confidence.



Key Features



Learn from experts decided by E&ICT Academy IIT Guwahati



Live intro sessions from distinguished IIT Guwahati faculty



Hands-on projects aligned to various industry verticals



Industry-oriented learning path



24*7 Support



Doubt Clearing Session



Industry-oriented curriculum



Job Assistance



Joint Certification by E&ICT Academy IIT Guwahati and Devarty



About E&ICT Academy IIT Guwahati

The sixth member of the IIT fraternity, IIT Guwahati was established in 1994. It has ranked in the top ten engineering institutes in India. IIT Guwahati offers courses in Engineering, Science and Humanities disciplines.

Electronics & ICT Academy at IIT Guwahati was established in 2016 sponsored by the Ministry of Electronics and Information Technology (MeitY) Government of India. Its aim is to provide industry-focused hands-on specialized training in EICT domain. The Academy conducts specialized/customized training programs and research promotion workshops for the corporate sector & educational institutions. It is envisaged that the EICT will become a central hub of activities on training, consultancy work and entrepreneurship programs.

E&ICT Academy IIT Guwahati has collaborated with Devarty to deliver this course. Devarty's immersive learning model focuses on practical learning to make an immediate career impact.

Admission Process & Eligibility Criteria

❖ Eligibility Criteria

- ✓ Candidate who has bachelor's degree from recognize university.
- ✓ Industry professional/research scholar/graduates student can join the course.
- ✓ Prior knowledge of basic programming and mathematics.

❖ Admission Process

- ✓ Candidate can register for the course on devarty.in or EICT website and join the program by paying the admission fee.
- ✓ You can talk to us and share why you want to join this program then our team will share the course outcomes and help you to get admission in the course.
- ✓ For bulk registration, write to us on admission.eictiitg@devarty.in

Talk to Admissions Team

Our team of admissions counselors is dedicated to assisting you throughout the application process, guidance and any related support. You can talk to them for:

- ✓ **Admission Guidance:** Help you understand the application requirements and ensure your submissions are complete.
- ✓ **Program Information:** Help you better understand the program and make an informed decision based on your aspirations.
- ✓ **Clarifying Queries:** They address your queries about application deadlines, prerequisites, and program details.



Course Outcomes

By participating in this course, you will get

- ✓ **Understand Data Fundamentals:** Comprehend the fundamental concepts of data, its types, and its significance in various industries.
- ✓ **Deploy Data Analytics Tools:** Use Python and relevant libraries for efficient data manipulation, analysis, and reporting.
- ✓ **Understand the process of data cleaning and preparation techniques** to clean, preprocess, and understand the raw data for analysis.
- ✓ **Master Data Visualization:** Create informative and visually appealing data visualizations to effectively communicate insights.
- ✓ **Employ Machine Learning Techniques:** Utilize machine learning algorithms for predictive modeling, classification, and clustering.
- ✓ **Generative AI Applications**
- ✓ **ChatGPT and Generative Content Creation**
- ✓ **Practice real-world projects and work on real-world data analytics** to hone skills in solving complex data challenges.
- ✓ **Stay abreast of the latest advancements in data analytics and data science** to remain competitive in the field.

Curriculum

- ✓ Introduction to Python
- ✓ Python fundamentals
- ✓ Python Core, Strings, Packages, Operators, Loops, Functions, Lists
- ✓ String Objects and Collection
- ✓ Tuples, Set, Dictionaries & Functions
 - Functions basics, Iterators, Lambda Functions
 - Sets, Operators
- ✓ Data Manipulation: Cleansing - Munging
 - Cleansing Data with Python
 - Filling missing values using lambda function and concept of Skewness.
 - Data Manipulation
- ✓ Python Pandas
- ✓ NumPy, SciPy
- ✓ File Operations
- ✓ Scikit-learn
- ✓ Seaborn
- ✓ Matplotlib

Curriculum

✓ Data Analysis Visualization:

- Descriptive statistics
- Frequency Tables and summarization
- Univariate Analysis (Distribution of data & Graphical Analysis)
- Bivariate Analysis (Cross Tabs, Distributions & Relationships, Graphical Analysis)
- Creating Graphs- Bar/pie/line chart/histogram/ boxplot/ scatter/ density etc)
- Important Packages for Exploratory Analysis (NumPy Arrays, Matplotlib, seaborn, Pandas and SciPy. stats etc)

✓ Statistics and Mathematics in AI

- Statistical Data Types
- Measure of Central tendency, Dispersion and Association
- Estimation and Hypothesis Testing
- Distributions
- Sampling techniques

Curriculum

✓ Machine learning

- Supervised Machine Learning techniques – what is it?
- How to build a model
- EDA
- Train, Test & Validation splits
- Predictions
- Over Fitting & Under Fitting
- Intro to Scikit learn

✓ Linear Regression

- Theory
- Simple and Multiple Linear Regression
- Assumptions
- R-square & Adjusted R-square
- MSE, RMSE, MAE, MAPE
- Hands-on: Predict Numbers (discrete / continuous)

Curriculum

- ✓ Logistic Regression
 - Theory
 - Confusion matrix
 - Precision Recall
 - Sensitivity
 - Specificity
 - ROC-Curve
 - F-score
 - Hands-on: Predict a binary class
- ✓ Unsupervised/Clustering
 - K-means
 - Case Study on the Teen marketing segmentation and targeting the customers
- ✓ Decision Tree
- ✓ Random Forest

Curriculum

✓ Generative AI

- Introduction to Generative AI:
- Definition and applications of generative models
- Difference between discriminative and generative models
- Examples of generative AI in various domains

✓ Chat GPT

- Introduction and content creation
- Synthesize information
- Productivity: Achieve your goals faster with Chat GPT, manage your time, and prioritize tasks
- Soft Skills
- Marketing: Generate targeted content with Chat GPT, capitalize on trends

✓ Project

✓ Assignments

✓ Master classes

✓ Quizzes

Skill Covered



Python



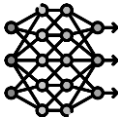
Data Science



Data Analysis



Data Visualization



Generative AI



Statistics



Machine learning



Artificial Intelligence

Projects

- ✓ This certification program offers practical experience through Industry Projects, coupled with guidance from Devarty and E&ICT Academy, IIT Guwahati.
- ✓ These hands-on projects are an integral component of your Data Analytics and Generative AI certification, enriching your understanding.
- ✓ You'll engage with actual datasets and knowledge from top-tier industry professionals, ensuring a real-world learning experience."



Certificate

- ✓ After successful completion of this program, you will receive a certificate of course completion from E&ICT Academy, IIT Guwahati

Coordinator, Advisor, and Instructor

Prof. Gaurav Trivedi

Associate Professor & PI - EICT
IIT Guwahati

Mr. Pranjal Mishra

Data Scientist, Devarty

Mr. Chandan Verma

Data Scientist, IBM India



Why Wait?

Start your journey in Data Analytics and Data Science by
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Contact Details

Connect to us if you have question:



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