



# Advanced Data Science & AI Certification Program



**Domain  
Electives**



**175% Average  
Salary Hike**



**Hybrid Model  
for Project Sessions**



[www.learnbay.co](http://www.learnbay.co)



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**2cr**

worth  
scholarship  
s awarded



**600+**

professionals  
secured jobs  
after a  
career break



**35k+**

Trusted  
Learners

## About The Program

Our Advanced Data Science and AI program is designed for professionals seeking to advance their careers in the fast-changing field. We emphasize **hands-on learning**, industry knowledge, and real-world examples, encompassing subjects such as statistics, data mining, and programming languages. Additionally, our program covers **generative AI** modules, enhancing your skills in this cutting-edge field. We also incorporate ethical aspects, providing an advantage to professionals in the job market.

“

**We exist to provide accessible, reasonable, and industry-relevant education that empowers India's workforce to grow and develop.**



4.79/5



4.66/5



4.8/5



# Program Highlights



## Industry-Relevant & Updated Syllabus

Learn the industry's latest tools, techniques & trends. Gain hands-on experience developing various apps.



## 360 Degree Knowledge Building

Develop practical skills through real-world projects and assignments



## 1:1 Dedicated Mentorship

Personalized learning experience from experienced industry professionals.



## Multiple Career Opportunities

Grow your career in data science and AI by targeting roles like data scientist, machine learning engineer, data architect, etc.

# Program Details

## COURSE PREREQUISITE

Prior knowledge of **programming/coding** is not mandatory. Just the urge to learn programming and basic ideas about advanced math is enough.

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## PROGRAM ELIGIBILITY

- ✔ **Working professionals** having more than 6 months of experience in any domain (Technical/Non-Technical)
- 

## KEY FEATURES

- ✔ Domain Electives ( [BFSI](#), [Retail](#), [Supplychain](#), [HR](#), [Marketing](#), [Healthcare](#) )
  - ✔ Dedicated Placement Cell | 100% Guaranteed Interview calls
  - ✔ Globally Recognised **Certification from IBM & Microsoft**
- 

## JOB ROLES TO TARGET

Get equipped with the industry relevant skills and aim for job roles like Sr. Data Scientist, Machine Learning Engineer, AI Engineer, BI Developer, Big Data Architect, Sr. Data Analyst etc.

Click below

[Check Eligibility](#)



# Alumni Spotlight



Shravanthi A  
Data Scientist

Learnbay has helped me a lot to learn data science applications in the e-commerce industry. The live class concept was really helpful in receiving proper DS training. Thanks to all my mentors and the placement team.

Mechanical  
Domain



Data Scientist @



 **230%**  
Salary Hike



Preksha Mishra  
Lead Data Scientist

The course structure is excellent with emphasis on concept building and tools & software at the same time. The support team is excellent and supportive and quite agile to respond to doubts.

Telecom  
Domain



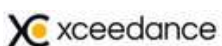
Data Scientist @



 **140%**  
Salary Hike



Karan Chawala



**EXL**

Data Scientist



Jaya Sinha



**Infosys**

Senior Analyst



Shubham Dev

publicis  
sapient



**brillio**

Lead Data Analyst

# Alumni Spotlight



**Mohd. Israr**  
Data Scientist

Thanks to the Learnbay data science course & excellent guidance, I was able to ace the TCS interview and secure a job with a 210% pay raise. The real-world time projects helped me develop my concepts as a data scientist.

**Mechanical  
Domain**



**Data Scientist @**



**210%**  
Salary Hike



**Saurabh Kumar**  
Data Scientist

When I joined Learnbay I did not have any knowledge apart from the very basics. I gradually build my concept via various trainers and get trained in data science with strong knowledge/concepts.

**Mathematics  
Professor**



**Data Scientist @**



**Teleperformance**

**135%**  
Salary Hike



**Aravind**



**Senior Data Scientist**



**Ritesh Kumar**



**Data Scientist**



**Ramki**



**Data Analyst**

# Learnbay's ProjectLab

Choose Learnbay for your career journey because we're more than just a training provider. Our Project Innovation Lab lets you apply your skills in real-world scenarios. Get [dual certifications](#) for a competitive edge. Specialize in your desired domain. Discover how Learnbay can boost your career growth. Don't settle for less – choose Learnbay, your path to success!

## 1 Project Innovation Lab



Work in an industry like environment and gain practical hands-on experience of data scientist with dedicated mentors from industry.

## 2 Domain Electives



Enhance career prospects and excellence in your chosen field with our domain electives.

## 3 Dedicated Placement Cell



Experience 100% job assistance with guaranteed interview call from leading MNCs and startups globally.

## 4 Degree & Certification



Gain top-notch skills for a successful career through our degree and certification program



# 1 Project Innovation Lab

Learnbay's Project Innovation Lab replicates industry like environment for real time projects. With our **ProjectLab**, you gain real proof of hands-on experience by having your project certified by the industry.

In our ProjectLab, you work like a data scientist with dedicated project mentors from industry and get certified on capstone project.

<b>450+</b> Hiring Partners		 1-1 Doubt Session
 PUNE		 HYDERABAD
		 <b>Capstone Project Certificate from IBM</b>
 <b>35k</b> Trusted Learners		
	  BENGALURU	<b>Project Innovation Labs Across India</b>

# 2 Domain Electives

We offer Domain Electives for various industries including BFSI, Retail, Healthcare, Manufacturing, and Supply Chain. This ensures that you gain expertise directly relevant to your current domain.

With our program, you can make your past domain experience relevant and position yourself for a significant salary hike.

**(Select any one)**



## BFSI

Advanced analytics for risk assessment and fraud detection in finance.

Brochure 



## Healthcare

Data-driven insights for improved patient care and medical research.

Brochure 



## Manufacturing

Optimising operations with data analytics and predictive maintenance solutions.

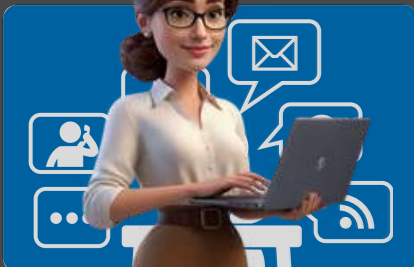
Brochure 



## Supplychain, E-com & Retail

Enhancing supply chain visibility and customer experience with data.

Brochure 



## Sales, Marketing and HR Domain

Data science can help marketers tailor their efforts to suit individual needs and preferences.

Brochure 



## Energy Oil and Gas

Data science can help the energy and utilities industry optimize the performance of critical assets.

Brochure 



## Media, Hospitality & Transportation

help businesses improve personalization, implement dynamic pricing, and perform predictive maintenance

Brochure 





## Get 1 year of Job and Placement support

Unleash your career potential with 1 year of unlimited job access, interview support, and profile review.

## 1 Mock Interviews with Industry Experts

Master the art of data science & AI and stay ahead of the curve with mockups and industry insights



## Resume Building Session

Craft a powerful resume showcasing your expertise in software development to stand out from the competition

## 4 Interview Call

Receive 4 interview calls from a diverse pool of interested employers/recruiters.





# 4

## Certificates



World's leading certifications



### IBM Course Certificate

Complete your training with the globally recognized certificate.



### Microsoft Course Certificate

Achieve professional growth & increase earning potential with Microsoft certification









### IBM Capstone Project Certificate

Highlight your skills & boost your project portfolio with capstone project certificate



# Others Vs Learnbay

Benefits		Learnbay	Others
	Guaranteed Interview Calls	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Industry capstone project certificate from IBM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Domain specialized programs for professionals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	100% live interactive sessions with industry experts	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	On-demand video call with industry experts	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Personalised Resume Review Session	<input checked="" type="checkbox"/>	<input type="checkbox"/>

# Program Fee & Financing



## Scholarship



Scholarships are awarded based on profile review. Eligible candidates can avail upto 25% scholarship on desired courses. Click the button below to apply.

Click below

[Check Scholarship Eligibility](#)

**Financing as low as  
Rs. 6,883/month**

**No Cost EMI**

 **Razorpay**

  
**LIQUILOANS**

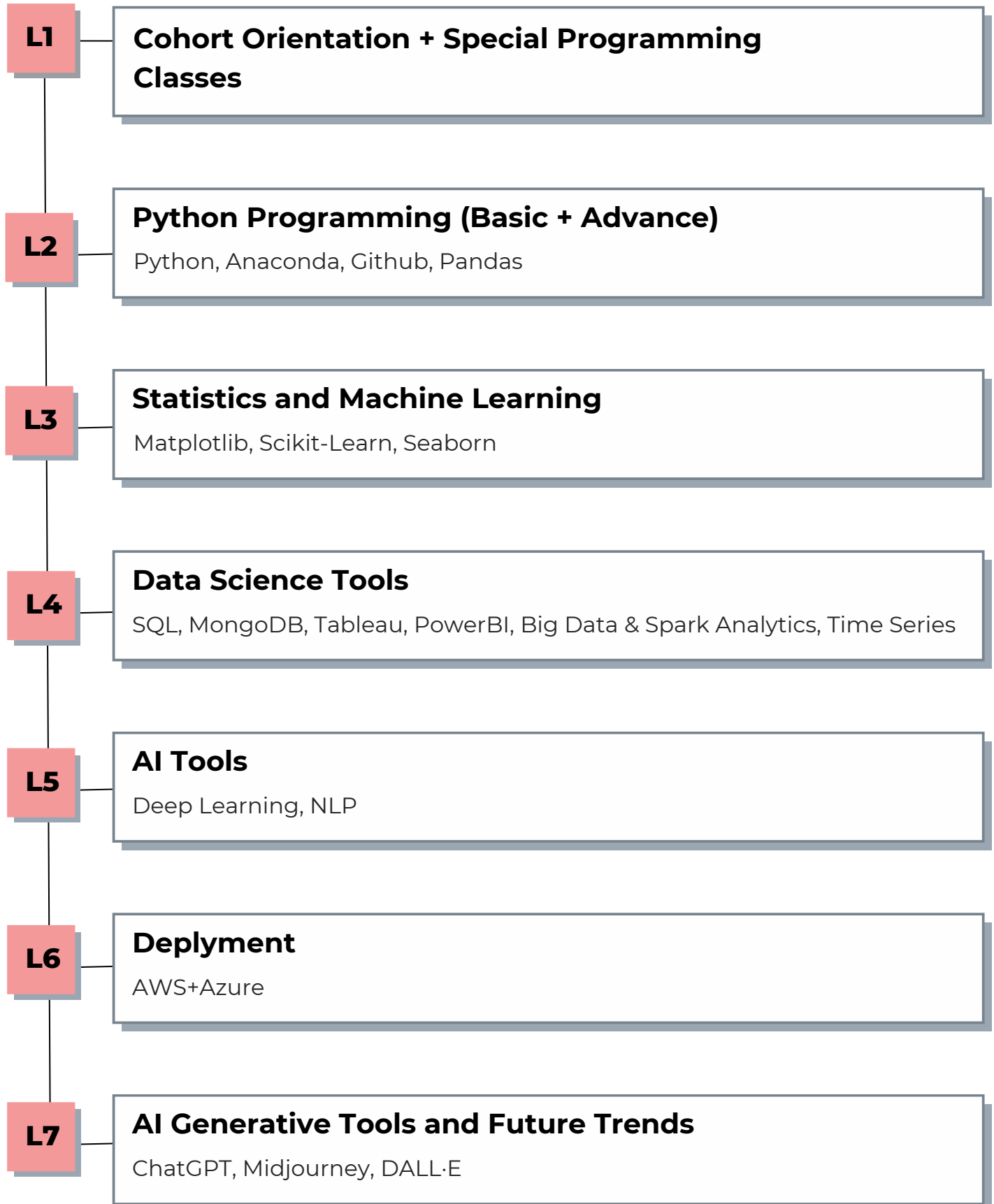
 **Propelld**

 **ShopSe**

**Program Fee**

Rs. 1,05,000/- +18% GST

# Learning Path





### Preparatory Session

08 Hours

#### Cohort Orientation

- A brief introduction to tools related to data
- Learn about particular real-time projects and Capstone projects
- Data and its impact on career opportunities
- Utilizing data, to enhance industrial operations and management

#### Fundamentals of Programming

- Introduction to Anaconda & Jupyter notebook
- Flavors of python
- Introduction to Git, GitHub
- Python Fundamentals

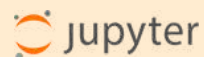
#### Tools covered



python™



ANACONDA



jupyter



GitHub

#### Fundamentals of Statistics

- Mean, Median, Mode
- Standard Deviation, Average. Probability, Permutations, and Combinations
- Introduction to Linear Algebra

#### Note:

*This session is specially designed for non- programmers to understand basics of computer programming and math.*

*Those who wish to brush up their programming skills can also attend this session.*

[Download Detailed Curriculum](#)



**40 Hours**

## Basic Python

- Programming Basics & Environment Setup
- Strings, Decisions & Loop Control
- Python Data Types
- Functions And Modules
- File I/O And Exceptional Handling and Regular Expression

### Class Hands-on:

6 programs/coding exercise on string, loop and conditions

8+ Programs to be covered in class of functions, Lambda, modules, Generators and Packages

10+ Programs to be covered in class from File IO, Reg-ex and exception handling

Tools covered



## Advance Python

- Data Analysis Using Numpy
- Data Analysis Using Pandas
- Data Visualization using Matplotlib
- Data Visualization using Seaborn



*3 Case Study on Numpy, Pandas, Matplotlib*

*1 Case Study on Pandas And Seaborn*

***Real time project will be covered after Python completion  
with 2 hours of assessment (coding and objective questions)***

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## Statistics and Machine Learning

**70 Hours**

### Statistic

- Fundamentals of Math and Probability
- All about Population & Sample
- Statistical Thinking
- Descriptive & Inferential Statistics
- Hypothesis Testing
- Linear Algebra
- Data Processing & Exploratory Data Analysis

#### **Hands-on:**

*Problem solving for C.L.T Problem solving Hypothesis Testing Problem solving for T-test, Z-score test Case study and model run for ANOVA, ANCOVA*

### Machine Learning

- Data Preprocessing
- Logistic Regression Model
- Evaluation Metrics for Classification model
- K Nearest Neighbours Model
- Decision Tree Model
- Random Forest Model
- Hyperparameter Tuning
- Naive Baye's Model
- K Means and Hierarchical Clustering
- Hierarchical Clustering
- Principal Component Analysis(PCA)
- Support Vector Machine(SVM)

#### **Case studies:**

- To classify an email as spam or not spam using logistic Regression
- Application of Linear Regression for Housing Price Prediction
- Recommendation Engine for e-commerce/retail chain
- Twitter data analysis using NLP

**Note :** *All Machine Learning Algorithms are covered in depth with real time case studies for each algorithm.*

[Download Detailed Curriculum](#)



## Big Data Analytics and Visualization

**86 Hours**

### SQL

- SQL and RDBMS
- NoSQL, HBase & MongoDB
- JSON Data & CRUD
- Programming with SQL

#### Assignments

- Working with multiple tables
- Practice Joins, Grouping and Subqueries
- Using GROUP BY and HAVING Clauses
- Practice Aggregation Queries

### MongoDB

- MongoDB Ecosystem
- MongoDB Structures
- MongoDB Shell vs MongoDB Server
- Data Formats in MongoDB
- Working with MongoDB Compass
- Working with Numeric Data
- Working on Scheme Designing

#### Assignment

Obtain the data in the format you want by formulating queries that are both effective and high-performing.

***Projects are the culmination of your learning journey, where you will tackle real data-related problems.***

### Tableau

- Dashboard and Stories
- Visual Analytics
- Custom Geocoding
- Polygon Maps
- WMS and Background Image

#### Assignments

- Connecting data source and data cleansing
- Working with various charts
- Deployment of Predictive model in visualization

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## Big Data Analytics and Visualization

**86 Hours**

### PowerBI

- Overview of the Workflow in Power BI Desktop
- Introducing the Different Views of the Data Mode
- Working with Time Series
- Scatterplots and BI Reports
- Connecting Dataset with Power BI

#### Assignments

- Create Bar charts
- Create Pie charts
- Create Tree maps
- Create Donut Charts
- Create Waterfall Diagrams
- Creating Table Calculations for Gender

### Sparks Analytics

- Introduction To Hadoop & Big Data
- Hadoop Master: Slave Architecture
- MapReduce Architecture
- Introduction to Spark SQL and Data frames
- Using R-Spark for machine learning

#### Hands-on

- Map reduce Use Case 1: Youtube data analysis
- Map reduce Use Case 2: Uber data analytics
- Spark RDD programming
- Spark SQL and Data frame programming

**Tools covered**[\*\*Download Detailed Curriculum\*\*](#)



## Big Data Analytics and Visualization

**86 Hours**

### Time Series

- Basics of Time Series Analysis and Forecasting
- Method Selection in Forecasting
- Moving Average (MA) Forecast
- Different Components of Time Series Data
- Log Based Differencing, Linear Regression for Detrending
- ARIMA Model Calculations, Manual ARIMA Parameter
- Selection ARIMA with Explanatory Variables
- Understanding Multivariate Time Series and their Structure

#### Assignment

- Time series classification of smartphone data to predict user behavior
- Performing Time Series Analysis on Stock Prices
- Time series forecasting of sales data



As Term 3 concludes, the following phase will involve an extensive exploration of all modules. This will be complemented by practical examples, demanding assignments, and culminating with your Capstone Projects.

This approach aims to enhance your understanding and real-world application of the modules.

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## Data Management and Deployment

50 Hours

### Deep Learning

- Introduction to Deep Learning And TensorFlow
- Understanding Neural Networks With TensorFlow
- Convolutional Neural Network (CNN)

### Natural Language Processing (NLP)

- Natural Language Processing
- Text Analysis
- KNN
- Applications of Levenshtein distance LCS Problems and solutions, LCS Algorithms.

### Deployment AWS+Azure

- Data Preparation and Feature Engineering
- Model Training and Evaluation
- Model Deployment and Management
- Advanced Topics in Machine Learning on AWS and Azure

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## AI Generative Tools and Future Trends



### Emerging Trends in AI and Generative Modeling

- Exploring other AI generative tools beyond [ChatGPT](#) and [DALL·E](#)
- Overview of Midjourney
- Discussion on future trends and advancements in AI generative tools
- Open-ended project and/or presentation on a selected topic, incorporating learned concepts

### Natural Language Processing and ChatGPT

- Introduction to natural language processing techniques
- Understanding ChatGPT and its architecture
- Hands-on exercises using ChatGPT for text generation
- [Fine-tuning ChatGPT for specific applications](#)



Midjourney



Bing



ChatGPT



DALL·E



Bard

### DALL·E: Image Generation with AI

- Exploring image generation using DALL·E
- [Hands-on exercises for creating unique images with DALL·E](#)
- Ethical considerations and limitations of AI-generated images

### Graph Neural Networks (GNN) for Data Analysis

- Overview of [Graph Neural Networks \(GNN\)](#) and their applications
- Hands-on exercises using GNN for tasks such as node classification and link prediction
- Case studies on real-world applications of GNN in data science

## Python Bootcamp for AI

- Python Essentials: Syntax, Data Types, and Variables
- Flow Control: Conditionals and Loops

## Build Your Interview Assistant

- Project Overview: Interview Automation Bot
- Components & Architecture
- Natural Language Models (LLMs): Introduction and Uses

## Large Language Models (LLM)

- Historical Overview of NLP: From Rule-Based Systems to Machine Learning.
- Evolution of Neural Network Architectures in NLP.

## Visual AI for eCommerce

- Introduction: Digital Transformation for Offline Businesses
- Multimodal Models: DALL-E and Beyond
- Style & Photography Principles for Visual AI

## Intelligent News Aggregator

- Project Outline: Personalized News Recommendation
- GPT-3 & Copilot for Code Automation



## Customer Support Bot - HelpMate Pro

- Project Introduction and Components
- Embeddings vs Fine-Tuning: When an
- How Semantic Search in Customer Service

## Knowledge Discovery Bot

- Project Overview and Architecture
- LangChain Tools and Concepts

## Azure OpenAI Integration

- OpenAI on Azure: Services and Scalability
- Revisiting HelpMate Pro: Scaling Strategy

## The Future & Ethics of Generative AI

- Responsible AI: Bias and Fairness
- Future Trends: Multimodal Models and RLHF
- Closing Remarks
- Assessment: MCQ

## Capstone Project (3 Weeks)

- Building an Integrated Prompt Engineering Solution
- Project Submission and Peer Review



The **IBM** exam will be conducted for all the modules after completion of the course

# Real-time Projects

## J.P.Morgan

### Learn and develop classification techniques for the digital transformation of banking

JPMorgan offers tax-friendly insurance choices. You can help them forecast insurance premiums. Targeted marketing using your Random Forest Algorithm skills can help obtain better premium values.



## NETFLIX

### Building a content recommendation model on the basis of regional viewer categorization

Netflix is a global entertainment video streaming site. They offer content in various regional languages. Build a local recommendation engine for Netflix customers residing in south Bangalore on their weekend and weekday activities, utilizing NLP.



### Reduction of waiting time via a highly precise forecasting model

Make a demand forecasting model based on specific time period rider demands. Such a model will help both riders and cab drivers to ensure the least possible waiting time. You can include measures like latitude and longitude identification.



### Understanding in-depth about logging while drilling (LWD) technique

Saudi Aramco company is working on the development of high-efficiency drilling models. Use the bright sides of big data analytics to identify the most cost-effective and highly productive drilling sites.



# Real-time Projects



## Career progression planning of employees with workforce defections and efficiency

IBM intends to boost its HR department by identifying employees' masked inconsistency. They need models to identify the graphical variations in their 14000+ employees' performances. Help them build models with your regressions and other ML abilities.



## Descriptive study of trends and irregularities with prediction analysis for conversion

Swiggy seeks a broad marketing campaign. But they need automated keyword generation tools & proper message preparation and delivery of the same to the right audience at the right time. Help them with text analytics and NLP-based keyword research.



## Forecasting future sales with trends and price maximization

BMW customers can sell old vehicles, but rivals provide superior resale prices. BMW's data science-powered software will deliver the greatest market value for used vehicles based on Km travelled, daily price changes, production dates, etc. Such tasks build analytical abilities.



## Understanding covid-19 cases and fatality rate by time series forecasting

Samsung will launch a new healthcare app soon. The key goal of this app is an accurate human activity tracking and providing relevant health-related recommendations. Continuous analysis with of a massive amount of mobile data is required for such an app.



# Real-time Projects



## Churn forecasting for the telecom industry using Python programming with Machine Learning

The goal of this project is to design a precise customer churn prediction model. Based on the same, Jio can identify the exact reason for customer dissatisfaction and work accordingly.



XGBoost



## Recommendation system with Customer Lifetime Value (CLV) analysis

Amazon wants to find the most successful electronics. Live consumer reviews are needed. Using data visualisation, help regenerate consumer insights from ongoing and current reviews.



## Condition-based preventative maintenance and fault prediction in depth

This project helped BOSCH to predict their internal failures by production line dataset analysis. But still, they are struggling to predict automated faults in their assembly stage. Help them by building more advanced predictive models for assembly stage monitoring.



## Automated inventory monitoring for supportable supply chain management

An automated inventory management system will keep track of stock levels and upcoming orders. In addition, you can contribute to DataCo's intelligent supply chain software generation project by using ML algorithms and Python programming skills.



# Contact Us



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or call us at  
**+91 77956 87988**

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