



iHUB DivyaSampark



Department of Science & Technology  
Government of India



# ADVANCED CERTIFICATION IN DATA ANALYTICS

Master Data Analytics skills and take your career to the next level!



10 Million  
Learners



1:1 Personalized  
Mentorship



55% Average  
Salary Hike

# Advanced Certification in Data Analytics

Master the skills of Data Analytics with this Advanced Certification in Data Analytics by iHUB DivyaSampark, a Technology Innovation Hub of IIT Roorkee and Intellipaat. Learn from IIT Faculty and industry experts with 1:1 mentorship.



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## Hottest Job of 21st Century



### 1.2 million Job Postings

According to a recent report by Indeed, there were over 1.2 million job postings for data analytics in 2023



### Skill Development

Data Analysts are equipped with various relevant skill, fetching lucrative job offers



### Growing Analytics Industry

The CAGR (compound annual growth rate) for data analyst jobs is expected to be 13.5% from 2023 to 2030.



### Future-oriented Career

Data Analytics is a budding field; a head start will prove to be beneficial



### Popular Degree

40% of the data analyst have masters degree



### High Demand

According to a report by the McKinsey Global Institute, there will be a shortage of 2.7 million data analytics professionals by 2023

## Our Credentials



### 10 Million+

Aspiring Active Students



### 1,000+

Industry-expert Instructors



### 400+

Hiring Partners



### 500+

Corporates Upskilled



### 55%

Average Salary Hike



### 155+

Countries' Learners

# About Program

The program aims to help learners develop a strong skill set including data analytics, descriptive statistics, probability distributions, predictive modeling, time series forecasting, and data architecture strategies as well as master the domain knowledge required to excel in this field.



## Learning Format

Online Bootcamp



## 7 Months

Live Classes



## Campus Immersion

at IIT Roorkee



## iHUB, IIT Roorkee

Certification

## Key Highlights

- ✓ 400 Hrs of Applied Learning
- ✓ 218 Hrs of Self-Paced Learning
- ✓ One-on-One with Industry Mentors
- ✓ Placement Assistance
- ✓ 24\*7 Support
- ✓ 1:1 Mock Interview
- ✓ 2 Days campus immersion at IIT Roorkee
- ✓ 50+ Live sessions across 7 months
- ✓ Learn from IIT Faculty & Industry Practitioners
- ✓ 50+ Industry Projects & Case Studies
- ✓ Resume Preparation and LinkedIn Profile Review
- ✓ Designed for Working Professionals & Freshers
- ✓ No Cost EMI Option

## Program Pedagogy



### Instructor-led Training

Get trained by industry experts from Top Product Companies & Startups



### Dedicated Learning Management Team

To help you with your learning needs



### Self-paced videos

Learn at your own pace with world-class content



### Projects and Exercises

Get real-world experience through projects



### Hackathons

Get a sense of how real projects are built



### Peer Networking and Group Learning

Improve your professional network and learn from peers



### Gamified Learning

Get involved in group activities to solve real-world problems



### 1:1 Personalized Learning

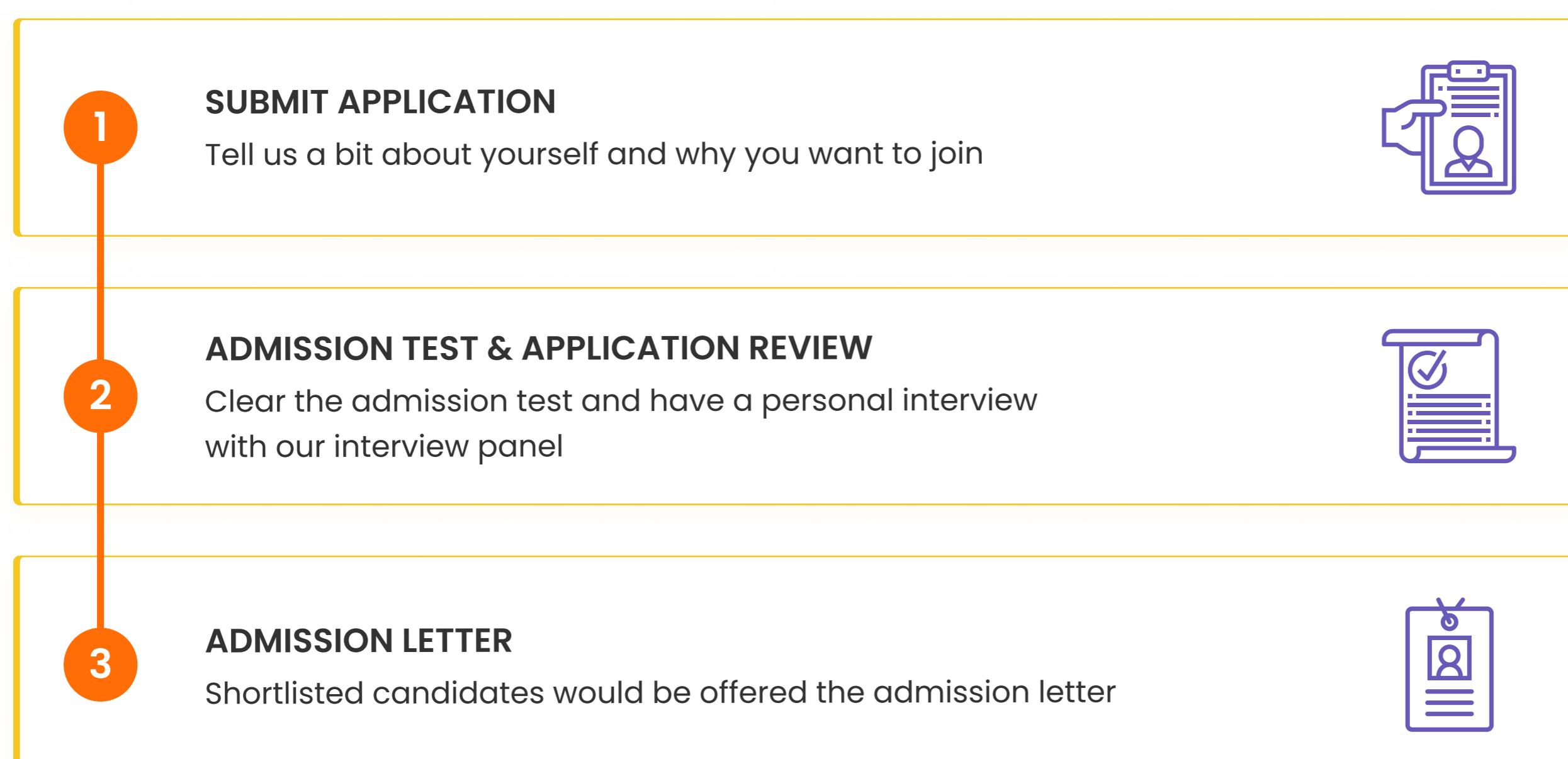
Hands-on exercises, project work, quizzes, and capstone projects

# Who Can **Apply for the Course?**

- ✓ Individuals with a bachelor's degree and a keen interest to learn Data Science and Data Analytics
- ✓ IT professionals looking for a career transition to Data Scientists and Data Analysts
- ✓ Professionals aiming to move ahead in their IT career
- ✓ Data Science and Data Analysis professionals willing to validate and develop skills in the domain.
- ✓ Developers and Project Managers
- ✓ Fresher's who aspire to build their career in the field of Data Analysis and Data Science

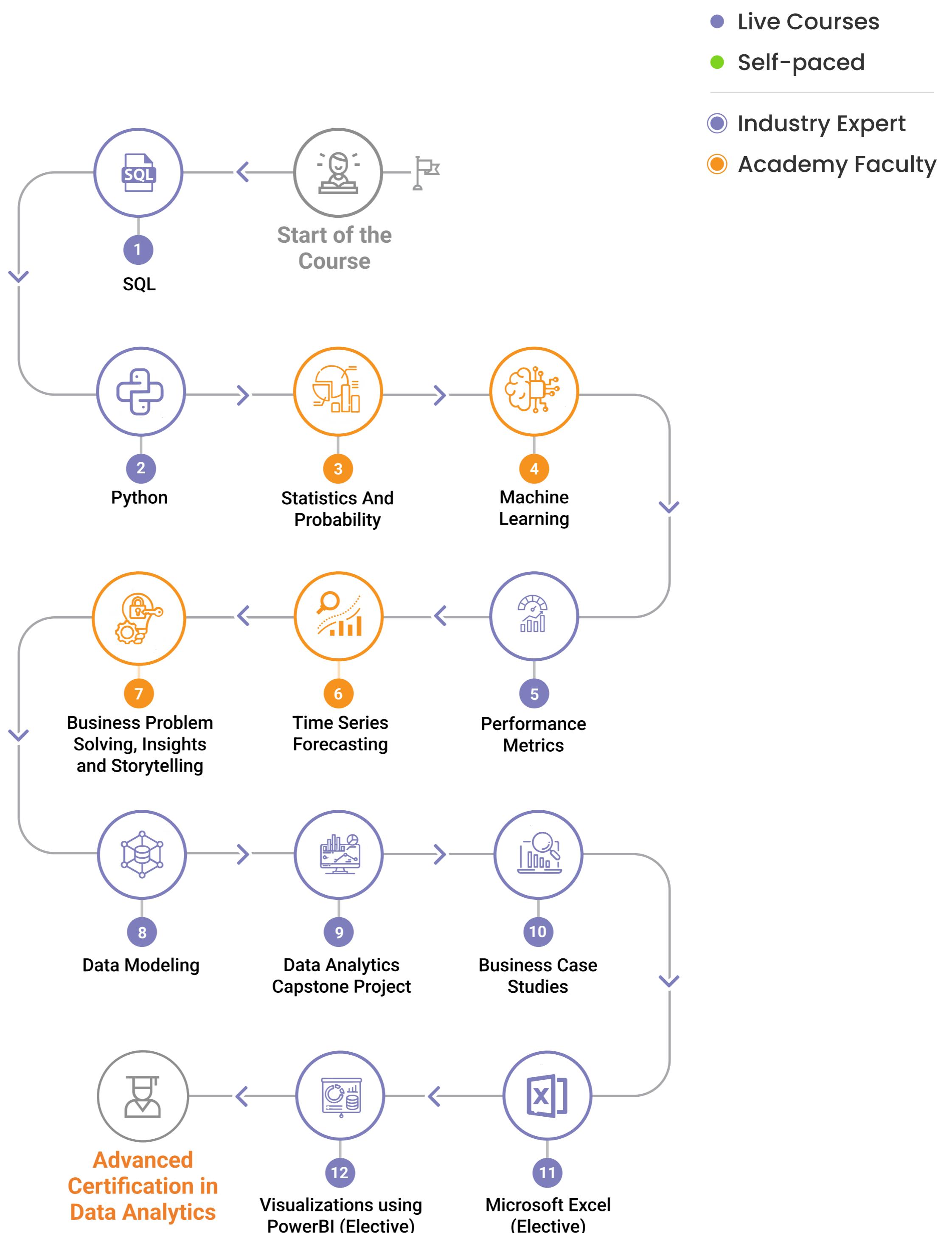
## Application **Process**

The application process consists of three simple steps. Candidates have to submit their application. An offer of admission will be made to the selected candidates, and their application will be accepted upon the payment of the admission fee.



# Learning Path

## Live Courses



## Self-paced Course

- R Programming

# Program Curriculum

## Module 1

### SQL

- Introduction to SQL
- Database Normalization and Entity Relationship Model(self-paced)
- SQL Operators
- Working with SQL: Join, Tables, and Variables
- Deep Dive into SQL Functions
- Working with Subqueries
- SQL Views, Functions, and Stored Procedures
- Deep Dive into User-defined Functions
- SQL Optimization and Performance
- Advanced Topics
- Managing Database Concurrency
- Practice Session
- Case Study

## Module 2

### Python

- Introduction to Python and IDEs
- Python Basics
- Data Manipulation with Numpy, Pandas, and Visualization
- Case Study

## Module 3

### Statistics And Probability

- Descriptive Statistics
- Probability
- Inferential Statistics
- Case Study

## Module 4

### Machine Learning

- Introduction to Machine learning
- Regression
- Classification
- Clustering
- Supervised Learning
- Unsupervised Learning
- Performance Metrics
- Time Series Forecasting

## Module 5

### Performance Metrics

- Classification reports – To evaluate the model on various metrics like recall, precision, f-support, etc.
- Confusion matrix – To evaluate the true positive/negative, false positive/negative outcomes in the model.
- r2, adjusted r2, mean squared error, etc.

## Module 6

### Time Series Forecasting

- Making use of time series data, gathering insights and useful forecasting solutions using time series forecasting.

## Module 7

### Business Problem Solving, Insights and Storytelling

- Business Domains
- Understanding the business problems and formulating hypotheses
- Exploratory Data Analysis to Gather insights
- Data Storytelling: Narrate stories in a memorable way
- Case Study

## Module 8

### Data Modeling

- Feature Selection
- Feature Engineering
- Model Tuning

## Module 9

### Data Analytics Capstone Project

- Problem Statement and Project Objectives
- Approach for the Solution
- Optimum Solutions
- Evaluation Metrics
- Gathering Actionable insights

## Module 10

### Business Case Studies

- Customer Churn
- Sales Forecasting
- Census
- Predictive Modeling
- HR Analytics
- Dimensionality Reduction

# Program Curriculum

- Housing
- Customer Segmentation
- Inventory Management
- Disease Prediction

## Elective

### Module 11

#### Microsoft Excel

- Excel Fundamentals
- Excel For Data Analytics
- Data Visualization with Excel
- Ensuring Data and File Security
- Getting started with VBA Macros
- Statistics with Excel

### Module 12

#### Visualizations using PowerBI

- Power BI Basics
- DAX
- Data Visualization with Analytics
- Case Study:

## Job Readiness

- Job Search Strategy
- Resume Building
- Linkedin Profile Creation
- Interview Preparation Sessions by Industry Experts
- Mock Interviews
- Placement opportunities with 400+ hiring partners upon clearing the Placement Readiness Test.

## Skills to Master

- SQL
- Advanced Statistics
- Data Wrangling
- Data Mining
- Data Analysis
- R Programming
- Prediction algorithms
- Data visualization
- Time Series
- Machine Learning
- PowerBI

## Tools to Master



# Course Projects

Projects cover the following industries:



Retail



Social Media



Supply Chain



Entrepreneurship



E-commerce



Banking



Healthcare



Insurance

## Predicting class of a flower

Beginner

This project is made to predict the class of a flower. By analyzing the data about the petal and their dimensions, the class of the flower would be determined using a trained Machine Learning model that has optimum accuracy.

## Fraud Detection

Beginner

The project is to create a model which would help in detecting Credit Card fraud using Machine Learning subcategories like supervised, unsupervised, and reinforcement learning techniques like Neural Network and Random Forest.

## Data Analytics on Census dataset

Beginner

The project is meant to analyze and predict whether an individual has an annual income of more than Rs 50,000 or less using various machine learning techniques, some of which are supervised and unsupervised learning.

## Pokemon Analysis

Intermediate

Select a pokemon whose primary type is "Grass", secondary type is "Poison" with the maximum speed. It creates a model that predicts whether the selected pokemon is Legendary or not using Machine Learning and Data Analysis techniques.

## Analyzing impact factors in Telecom

Intermediate

The project aims to find the most impacting factors in the preferences of the pre-paid model and to identify which variables are highly correlated with impacting factors. The goal of this project is to find the factors that have the maximum impact on the preferences of the pre-paid model.

## Stock Market Analysis

Intermediate

This project focuses on Machine Learning by creating a predictive data model to predict the future stock prices. It also analyzes the current trends in the stock market using algorithms like Linear Regression and k-Nearest Neighbors.

## Comment Identity & Classification

Advance

Work on the comment dataset of Yelp to build a multi-headed model that can identify & categorize various types of toxic comments (obscenity, insults, threats etc.). It must allow the user to find and select the required type

## Loan Approval Prediction

Advance

The project aims to analyze whether the applied loan would be approved or not by identifying the variables correlated with impacting factors. It is predicted using techniques such as Logistic Regression, Decision Tree and Random Forest.

## Book Recommender

Advance

This project aims at building a book recommendation engine based on past reading and buying history of an individual. It will analyze the dataset using Machine Learning techniques, R programming and its various libraries.

## Recommendation Engine using Netflix prize

Advance

The recommendation engine is built using Netflix prize dataset that will collect the data from various sources of a user, anticipate their preferences and will recommend movies according to the user's behavior and choices made earlier.

# Course Advisors / Faculty



## Manish Anand

CEO at iHUB IIT Roorkee

Manish Anand is an IIT Kanpur alumnus with an MBA in Technology and innovation management from Korea Advanced Institute of Science and Technology (KAIST), Seoul. He currently heads iHUB DivyaSampark, a Technology Innovation Hub hosted at IIT Roorkee.



## Dr. Sudeb Das Gupta

Professor at IIT Roorkee

Dr. Sudeb Dasgupta is currently working as Professor at IIT Roorkee. He has completed his PhD from Banaras Hindu University in Electronics Engineering and has more than 20 years of teaching experience.



## Dr. Balasubramanian R

Professor at IIT Roorkee

Dr. Balasubramanian R, is currently working as Professor at IIT Roorkee. He has completed his PhD from IIT Madras in Mathematics and Computer Science and has more than 20 years of teaching experience. His areas of interest include computer vision, machine learning, pattern recognition, deep learning, etc.



## Mr. Rupesh Nasre

Associate Professor at IIT Madras

Mr Rupesh Nasre is currently working as an associate professor in the CSE Department at IIT Madras. He holds a PhD from IISc Bangalore, and Post-Doctoral Fellowship from the University of Texas at Austin.



## Dr. Sushanta Karmakar

Associate Professor at IIT Guwahati

Dr. Sushanta Karmakar is currently working as Associate Professor, at IIT Guwahati. He has completed his PhD from IIT Kharagpur from the Computer Science and Engineering department and has over 15 years of teaching experience.



## Nishkam Shivam

Senior Data Scientist at Bristlecone

A Senior Data Scientist in the field of Analytics and AI, Mr. Nishkam Shivam is presently working at Bristlecone. He has 9+ years of experience in this particular field and has also worked in renowned companies like Accenture, Walmart, Emeritus, and many more.



## Madhu Babu Cherukuri

Sr. Data Scientist at Intel Corporation

He carries over 15 years of expertise in handling various analytics projects, using several types of ML algorithms in multiple business domains. He also comes with extensive knowledge in SAS, SQL, R, Python and is proficient in Big Data Environment.

# Course Advisors / Faculty



## Phaneendra Akula

Senior Manager, Data Science at Sunrise Systems

Mr. Akula is presently working at Sunrise Biztech Systems Private Limited. He has 9+ years of experience in the field of Data Science and has worked in many prestigious companies like Genpact, TCS, and Tesco. He is also a research scholar and a speaker.



## Vishwath Parthasarathy

Data Scientist-III at InMobi

Mr. Parthasarathy is currently working as a Data Scientist-III at InMobi. He has also worked at Amazon and PipeCandy. His expertise extends to Machine Learning, Deep Learning, MLOps, and Algorithmic Trading. He has been working since 2017 as a Data Scientist.



## Anurag Singh

Principal AI Architect at Schneider Electric Hub

Mr. Singh works at Schneider Electric Hub as a Principal AI Architect. He started as a Software Engineer in 2007 and has been working as Data Scientist since 2018. He specializes in Big Data, Data Science, Machine Learning, and AI System Architecture.



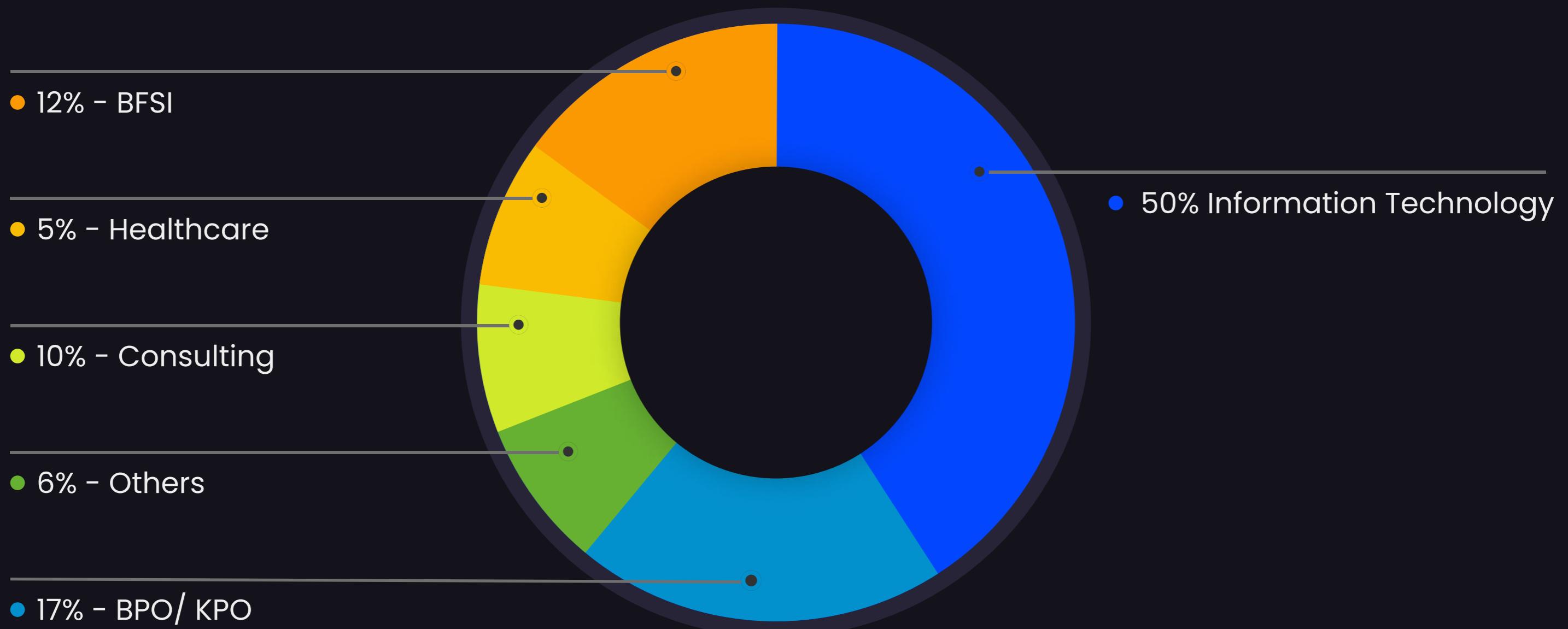
## Muthusamy Manigandan

Data Science Consultant, Ex- Apple

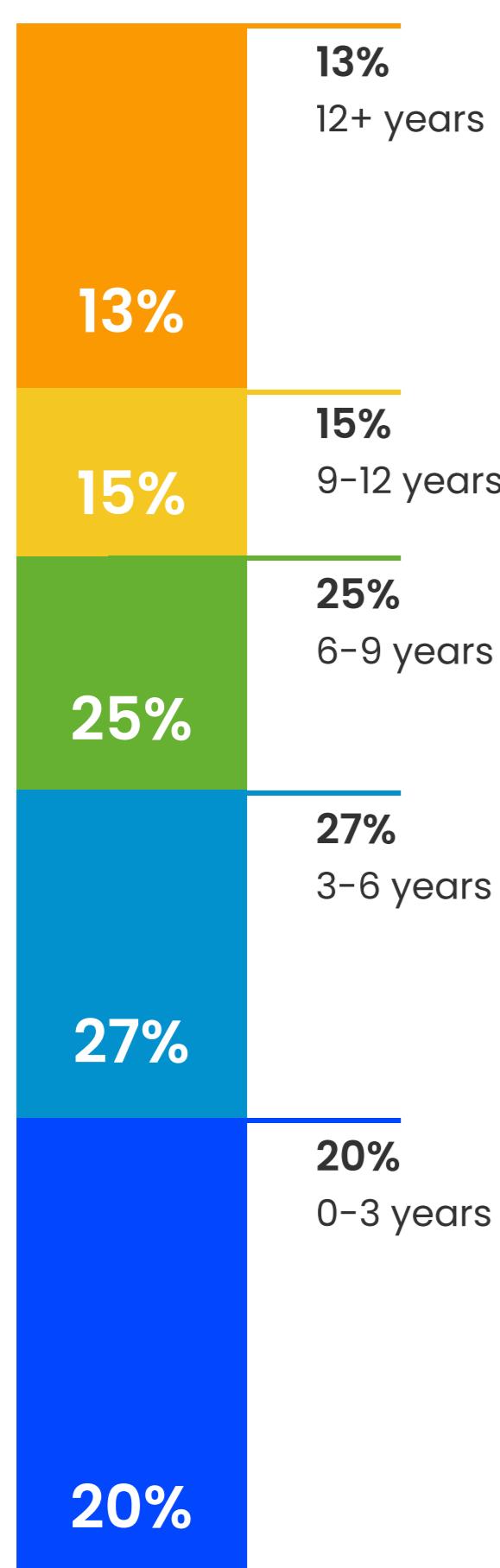
Manigandan has 16+ years of experience in cloud projects for Fortune 500 companies. He comes with a strong background in architecture and implementation of AWS, Azure, GCP, along with hands-on experience in DevOps tools.

# Meet the **Batch**

## Industries Our Learners Come From



## Work **Experience**



Some of their current employers include



# Glimpse of our Successful Transitions



4.6 ★★★★☆



4.5 ★★★★☆



4.38 ★★★★☆

## Career Transitions



**Shubham Shinde**  
Data Analyst | India

From  
Business Intelligence  
Specialist

To  
Data Analyst



**Kiran Kulkarni**  
Sr. Data Analyst | India

From  
BPO Associate

To  
Sr. Data Analyst



**Aditya Ahuja**  
Data Analyst | India

From  
Software Test  
Engineer

To  
Data Analyst



**Lucky Bajetha**  
Data Analyst | India

From  
Human Resource  
Executive

To  
Data Analyst



**Shehzin Mulla**  
Research Analyst

From  
Data Analyst

To  
Research Analyst



**Jeanette Masso**  
Big Data Developer

From  
Computer Technical  
Specialist

To  
Big Data Developer



**Prosenjeet Saha**  
Data Scientist

From  
Manager Analytics &  
Data Science

To  
Data Scientist



**Pratik Kumar**  
Product Manager

From  
Marketing Manager

To  
Product Manager



# Intellipaat Career Services



500+  
Webinars



600+  
Job Shares



400+  
Hiring Partners



55%  
Avg. Salary Hike\*

## What Makes Us **Tick**



### Career-oriented Sessions

Attend 10+ career-oriented sessions by industry mentors and prepare your career trajectory



### Profile Building

Craft a Data Analytics resume and LinkedIn profile to make an impression on top employers



### Mock Interview Preparation

Prepare with mock interviews including most asked questions by top employers



### 1:1 Mentoring Sessions

Get 1:1 guidance at every step in your career transition to Data Analytics



### Placement Assistance

Placement opportunities are provided once the learner is moved to the placement pool upon clearing Placement Readiness Test (PRT)\*\*



### Dedicated Job Portal Access

Get exclusive access to 200 job postings per month on Intellipaat's job portal



### Job Fairs

Job fairs are conducted regularly to introduce learners to major organizations



### Hackathons

Work in teams and get exclusive access to hackathons

## Learner **Reviews**



**Pradeep P k**  
Senior Programmer Analyst III  
at Hubbell Incorporated

The Data Science and Machine Learning course from Intellipaat was taught from the basics. The trainers are knowledgeable with clarity of practical concepts. The support team is prompt with the response.



**Mohit Hinwar**  
Data Science & Analytics Enthusiast

I am happy to be able to complete this certification from Intellipaat. I appreciate the entire team for providing me with amazing learning experience through real-time projects and case studies.



**Shubham Gupta**  
Team Leader (Data Analyst) at Ziff Davis

Intellipaat provides a great learning environment inclusive of new-age technologies. I worked on many Data Science tools through live training and self-paced videos. The trainers are very supportive.

# Program Partners



## About Intellipaat

**Intellipaat** is one of the leading online training providers with more than 10 million learners in over 155 countries. We are on a mission to democratize education as we believe that everyone has the right to quality education.

We create courses in collaboration with top universities and MNCs for employability like EICT IIT Roorkee, EICT IIT Guwahati, IITM Pravartak, IIM Ranchi, IIT Jammu, IU, LSBU, University of Essex, University of Liverpool, IBM, Microsoft, etc.

Our courses are delivered by SMEs & our pedagogy enables quick learning of difficult topics. 24/7 technical support & career services help learners to jump-start their careers.



## About iHUB DivyaSampark, IIT Roorkee

iHUB DivyaSampark, IIT Roorkee aims to enable an innovative ecosystem in new-age technologies like AI, ML, Drones, Robots, and data analytics (often called CPS technologies). It aims to do this by promoting and enhancing core competencies, capacity building, and manpower training to provide solutions for national strategic sectors and become a significant contributor to Digital India.

### Achievements – IIT Roorkee:

- Ranked 7th 'Overall' and 6th in 'Engineering' in India as declared by NIRF 2022
- Ranked 175th in the world for 'Engineering and Technology' by QS World University Rankings 2023
- Ranked as the 369th best institute in the world by QS World University Rankings 2023
- Ranked as the 114th best institute in Asia by QS World University Rankings 2023

### Upon the completion of this program, you will get:

- Certification from iHUB DivyaSampark, IIT Roorkee



**10 Million** Learners & 500+ Corporates across 155+ countries  
upskilling on Intellipaat Platform



## Contact Us

### INDIA

AMR Tech Park 3, Ground Floor, Tower B, Hongasandra Village,  
Bommanahalli, Hosur Road, Bangalore, Karnataka 560068, India  
Phone No: +91-7022374614

### USA

100 Church Street, New York City, NY