



Certification Program in

# DATA SCIENCE & ANALYTICS

Course duration: 6 months



## About Us

upGrad Campus is a

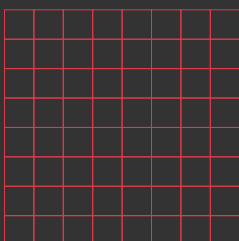
### **video learning platform for online education,**

with certificate courses specially curated for college students and young adults. As an affiliate of upGrad, India's largest online higher education company, upGrad Campus aims at making every graduate job-ready, with professional skills and practical know-how for the most sought-after fields of work.

Our aim is simple: We strive to create high-impact, hands-on experiences that prepare learners for meaningful and productive careers.

#### **Ronnie Screwvala**

Co-founder and Executive  
Chairman, upGrad



# Master today's most in-demand skill – Data Science & Analytics

## Why are Data Science and Data Analytics so important?

In today's hyper-digital economy, data is the new oil. Immensely valuable and largely untapped, it holds tremendous potential for businesses, governments and individuals alike to reap big rewards – provided they are able to extract useful insights from the data.

And that's where Data Science & Analytics come in.

Data Science and Analytics involves using scientific methods to extract, process and organise structured and unstructured data to derive valuable insights used for decision making. As of 2021, the size of the data universe already exceeds 64 Zettabytes – that's the equivalent of 64 trillion 1 TB hard disks. With this number only growing further, Data Scientists and Data Analysts are steadily becoming the most sought-after experts today.

## Who should opt for this certification course?

Anyone with an inclination towards data patterns, numbers and Problem-solving and looking to become a Data Scientist or Data Analyst should sign up for this course. While a background in programming is not mandatory, an interest in coding will help you master concepts more easily and achieve your career goals faster.



# Why Become a Data Scientist or Data Analyst?



## Invaluable part of the team

A company cannot function with raw data, if there are no experts to sift through data and arrive at valuable insights. Data Analysts and Data Scientists have a massive impact on the business of a company and thus, are an invaluable part of it.



## Jobs on the rise

The demand of Data Analysts and Data Scientists in most companies is going through the roof while the supply still remains low. It is the right time to specialise in Data Science & Analytics and reap the benefits of a rewarding career.



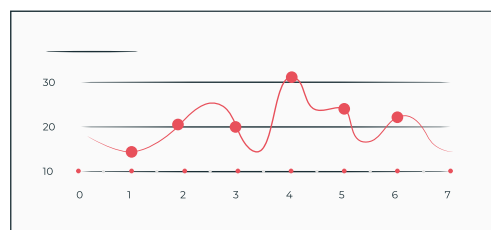
## High salaries

Since demand for Data Scientists and Data Analysts is way more than the supply, salaries are quite high in the field. Even as a fresher, these experts can earn starting from Rs. 5 lakhs per annum.



## Opportunity to work in different industries

Data Scientists and Data Analysts are not bound by a specific genre because data is an essential part of any industry. So these experts have the option to choose from any number of industries.



# Why Opt for the Certificate Course in Data Science & Analytics from upGrad Campus?



## The Best Mentors

Learn everything about Data Science & Analytics from the top experts in the field, who have an advanced understanding of the current market scenario. Attend live lectures, doubt-clearing sessions and more.



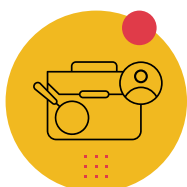
## Curriculum Curated For College Students

This course curriculum is specifically designed to give beginners a strong foothold on the Data Science & Analytics concepts. From covering the tools you will be needing on a day-to-day basis to helping you make data-driven decisions at an organisational level, this curriculum equips you with the skills that top organisations are looking for.



## Dedicated Student Support

Strong and friendly assistance from students throughout the program helps you clear your doubts. Our TAs will help you in learning the subject with doubt-clearing sessions during the week and practical hands-on training over the weekend. Join the hangout sessions, where you can learn from subject matter experts and strengthen your conceptual learning. Be a part of the discussion forums, to resolve your queries and reinforce learning.



## Multifaceted Development

This program covers all the fundamental concepts of Data Science & Analytics right from developing problem solving skills to applying these skills to business. Moreover, it also demonstrates the best communication practices you need to follow as a data storyteller.



## Ready Set Go for Your Job

You will get to learn industry-relevant skills that will give you an understanding of the challenges and opportunities in the top organisations, and apply these learnings in live projects.

# Benefits of the Program



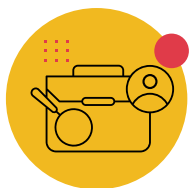
## Learn required skills

With this certification program, you will be taught how to analyse data using Excel and SQL, Python, Statistics and Exploratory Data Analysis, Machine Learning, Data Storytelling using Tableau, Business Problem Solving, and more.



## Practice tools and technologies

Build a strong foundation in commonly used Python libraries like matplotlib, pandas, Numpy, and scikit-learn, and also learn how to apply them to real-world data from industry experts.



## Crack the interviews

Master the fundamentals of Data Science & Analytics and crack the interview rounds to land a dream job with a big brand.



## Receive personalised assistance

Get personalised subjective feedback on your submissions and improve your skills.



## Stand out with an impressive certificate

Upon completing the course, receive a personalised certificate, signed by the CEO of upGrad Campus, that is bound to improve your career opportunities.



## Course Structure

**Get 300+ hours** of content through

### Recorded Videos

Learn through world-class pre-recorded lectures on major concepts delivered by industry leaders.

### Live Classes

Interact with industry experts in LIVE sessions.

### TA Sessions

Get timely doubt resolution and hands-on guidance for projects and tools.

### Skills you will learn

- Python for Data Science
- Supervised and Unsupervised Machine Learning
- Data Modelling
- Data Visualisation
- Data Storytelling



# Course Curriculum

## 01 Problem Solving Skills

- Introduction to Problem Solving
- Approach to Problem Solving
- Aids to Business Problem Solving

## 02 Data Toolkit

- Introduction to Python Programming
- Data Cleaning in Python
- Introduction to Kaggle
- Python for Data Analysis – Numpy, Pandas
- Python for Data Visualisation – Matplotlib, Seaborn

## 03 Introduction to SQL

- Database Design and Data Warehouse
- Data Modelling
- SQL Querying
- Joins and Set Operations
- Business Problem-solving using Data Modelling

## 04 Data Visualisation (Optional)

- Introduction to Data Analysis
- Creating and Formatting Charts
- Creating a Pivot Table
- Analysing Data in a Pivot Table
- Getting Started with Tableau
- Charts, Plots, Hierarchies
- Grouping and Tree-Maps
- Dashboard Creation
- Storytelling

## 05 Exploratory Data Analysis and Statistics

- Inferential Statistics
- Hypothesis testing
- Data Sourcing
- Data Cleaning
- Univariate Analysis
- Bivariate Analysis
- Derived Metrics

## 06 Machine Learning

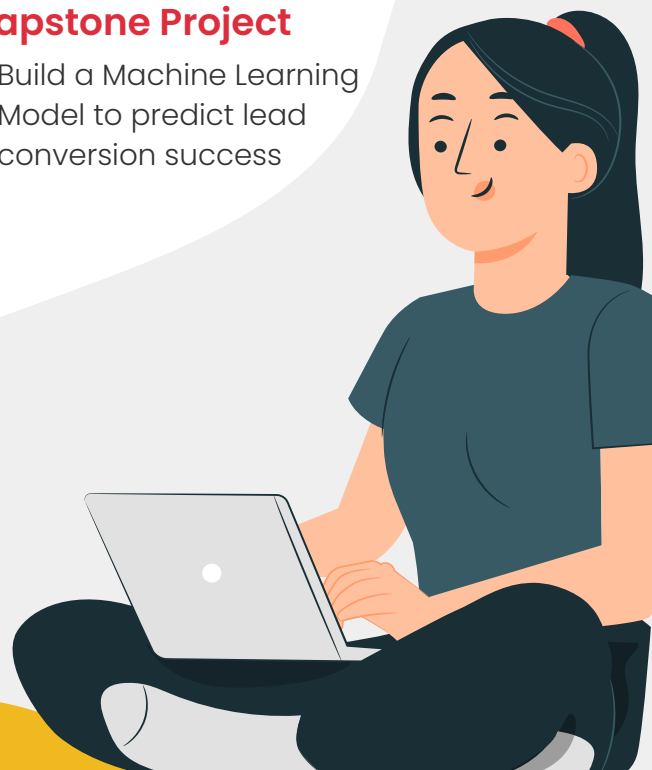
- Maths Essentials for ML (Optional)
- Linear Regression
- Logistic Regression
- Decision Trees
- Clustering

## 07 Business Understanding

- Data Storytelling and Effective Communication
- Business Problem Solving

## 08 Capstone Project

- Build a Machine Learning Model to predict lead conversion success





## Tools & Platforms Covered



### **Python for Machine Learning**

Learn Python from scratch and understand its use in linear regression, logistic regression, decision trees and more.



### **Data Visualisation with Tableau**

Use Tableau Dashboard to make charts, treemaps, histograms and other elements for effective data storytelling.



### **Understanding Database with MySQL**

Explore database design, data modelling, SQL querying, joins and set operations with MySQL.



### **Data Analysis in Excel**

Learn how to use Excel interface to build reports, charts and pivot tables, along with complex functions and formulae.



### **Data Manipulation using Pandas**

Make use of Pandas to perform powerful functions like indexing, slicing, grouping and pivoting data.



### **Learn from Kaggle's community**

Collaborate with other members, find and publish datasets, use GPU integrated notebooks, and compete with other data scientists to solve data science challenges.



# Placement and Career Support

Sign up for these add-on programs to take your career to your dream company!

## Programs to get you Guaranteed Internship/Job Opportunities

Join these programs at just Rs. 18000 or opt for these programs in combination with the Data Science and Analytics Course and get 20% off!

### Internship Plus

2 months program

Guaranteed Internship Opportunities in top companies

Designed for 1st year, 2nd year & 3rd year students

### Placement Plus

5 months program

Guaranteed Job Opportunities in top companies

Designed for 4th year students and freshers

Our Placements Team will guide you in every step towards your dream company



## Program Details

Course starts

**Please refer to the website  
for program start dates**



Fee structure

~~₹ 50,000~~ ₹ 40,000/-

Duration

**6 months**



Program hours

**300+ Learning Hours  
Live Sessions every  
weekend**

For admissions, contact

**+91 8035241332**

**+91 8048160842**

**admissions.campus@upgrad.com**

**upGrad**  
**Campus** 

