



Certification Program in  
**DATA SCIENCE  
& ANALYTICS**

Course duration: 6 months



## About Us

upGrad Campus is a  
**video learning platform  
for online education,**

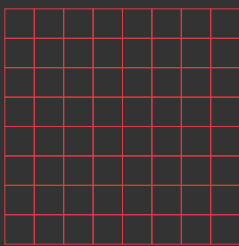
with certificate courses specially curated for college students and young adults. As an affiliate of upGrad, India's largest online higher education company, upGrad Campus aims at making every graduate job-ready, with professional skills and practical know-how for the most sought-after fields of work.

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

**Ronnie Screwvala**

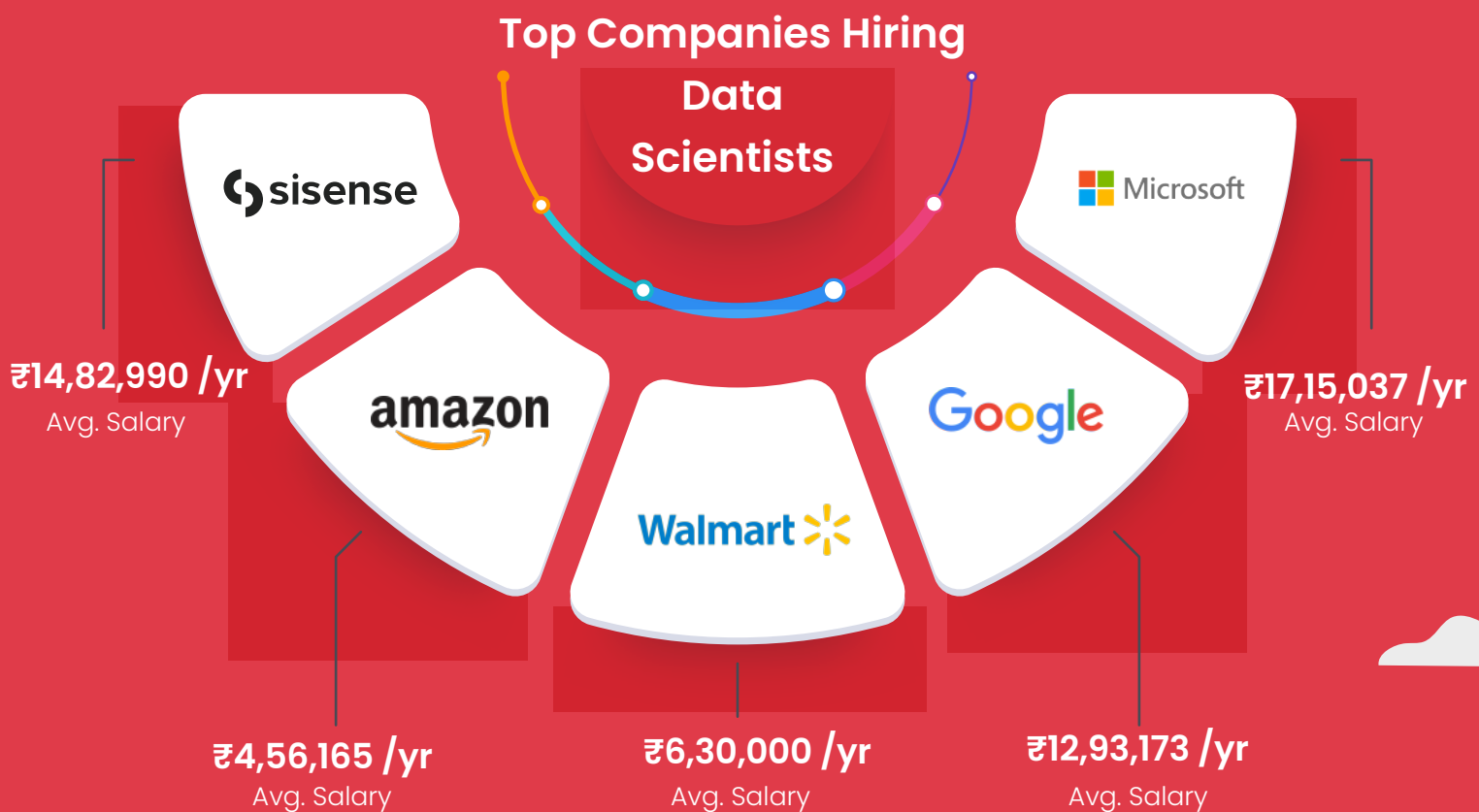
Co-founder & Executive  
Chairman, upGrad

”



# Data Science and Analytics the most wanted skill today!

By 2025, data from all over the world will increase to 175 Zettabytes - making Data scientists and Analysts vital for every industry! Checkout the places your expertise would be required in:



Source: Glassdoor

## Benefits of learning Data Science

- The supply of Data Scientists is too less than its demand, making it the most in-demand skill today
- Data Science finds its application in every industry, making it perhaps the most versatile skill
- This career path has ample growth opportunities and is both financially and professionally rewarding

# Roadmap to Mastering Data Science and Analytics with upGrad Campus

**Learn the basics of coding**

Skills : Python and it's Libraries

1

**Understand how data is stored and represented**

Skills: SQL (Structured Query Language)

2

**Present your data in the form of powerful visualizations**

Skills: Tableau and Excel

3

**Grasp mathematical concepts used in Machine Learning Algorithms**

Skills : Statistics & Linear Algebra

4

**Apply Machine Learning techniques to real-world business problems**

Skills: Data Storytelling and Business Problem Solving

5

**Our students who completed this course applied for jobs as:**

Data Scientist | Data Analyst | Associate Analyst Manager

Business Intelligence Developer | Applied Machine Learning Engineer



# Data Science and Analytics Certification Course

Best-in-class program by industry experts

## Program Eligibility

This program is especially designed to teach Data Science for beginners. It covers everything starting from the very basics, including programming with Python. So a coding background is not compulsory (although knowing a coding language like Java, Python or C/C++ is an added bonus).

## Top skills you will learn

Python programming, Machine Learning, Tableau, SQL and Python libraries including NumPy, Pandas, Matplotlib and many more!

## Global Standard Curriculum

Our robust and beginner-friendly course will give you  
**300+ Hours** of Learning Content Including  
**80+ Hours** of Live Sessions  
**200+ Hours** of Recorded Classes

## Practical Learning

**6** Projects  
**4** Case Studies  
*Along with graded assignments*



# Why Choose to Learn Data Science with upGrad Campus?



**Guaranteed Certification**  
by upGrad Campus



**Beginner Friendly Course**  
that covers all the fundamentals of DSA



**Distinguished Faculty**  
with years of industry experience



**Dedicated Student Support**  
from Teaching Assistants Mentors



**Live Classes on Weekends**  
to interact 1:1 with industry experts and TAs



**Job-ready Projects**  
based on real world experience



**Easy Doubt Resolution**  
through doubt-clearing sessions and peer support groups



**Recorded Sessions**  
that you can access content for up to 3 years



**Crack Interviews**  
and impress recruiters with your DSA skills

## 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.

# Course Curriculum

## 01 Problem Solving Skills

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

## 02 Intro to Python Programming

- Data Types and Variables in Python
- Data Structures in Python
- Control Structures and Functions in Python
- Object-Oriented Programming (OOP) in Python
- Problem-Solving in Python

## 03 Python for Data Science

- Numpy Arrays and Operations
- Data Manipulation with Pandas
- Data Cleaning in Python
- Introduction to Kaggle
- Various Plots in Matplotlib
- Data Visualisation with Seaborn

## 04 Introduction to SQL

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

## 05 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





# Course Curriculum

## 06 Exploratory Data Analysis and Statistics

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

## 07 Machine Learning

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

## 08 Business Understanding

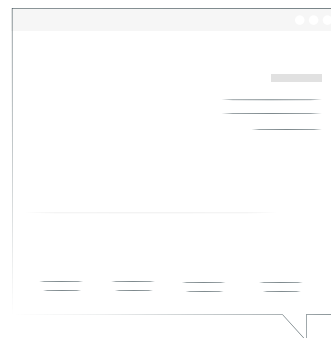
- Data Storytelling and Effective Communication
- Business Problem Solving

## 09 ChatGPT and Generative AI

- Using ChatGPT for Communication and Research
- Leveraging ChatGPT for Python and SQL
- Other Generative AI Tools
- Introduction to OpenAI APIs
- Whisper API and DALL-E API
- Prompt Engineering Basics

## 10 Capstone Project

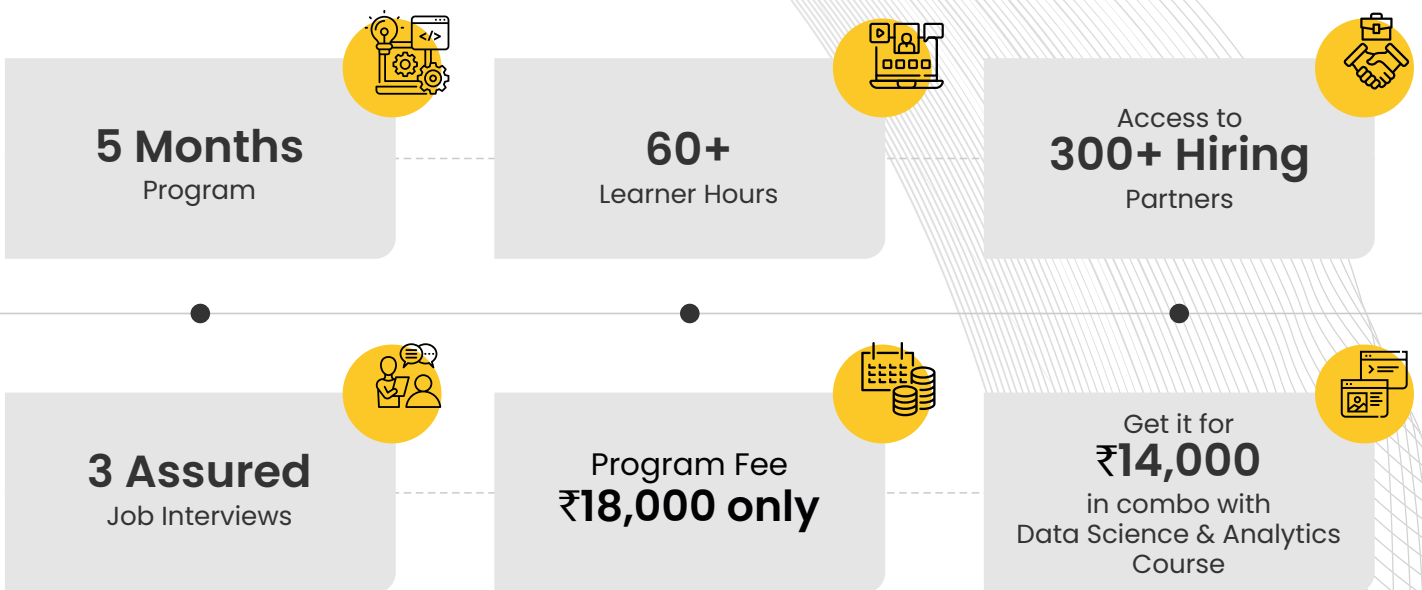
- Build a Machine Learning Model to predict lead conversion success



# Get 3 Assured Job Interviews with Placement Plus

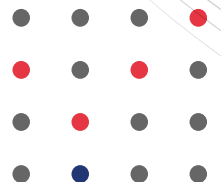
## Become 100% Placement-ready with this Add-on Program

Get trained on aptitude and soft skills with Placement Plus - an add-on course designed to help you crack your interview and take you to your dream company.



## 5 Months of LIVE Training to Land Your Dream Job

- Resume Building
- LinkedIn Profile Creation
- Quantitative Training
- Problem Solving & Logical Reasoning
- Public Speaking & Oral Communication
- Non-verbal Communication
- Mock Interviews
- Group Discussions



## Program Details

Course starts

Please refer to the website  
for program start dates



Fee structure

₹ 65,000  
₹ 47,000/-

Duration

6 months



Program hours

300+ Learning Hours  
Live Sessions every  
weekend

For admissions, contact  
1800 210 7070  
[admissions.campus@upgrad.com](mailto:admissions.campus@upgrad.com)

**upGrad**  
Campus 

