



International
Institute of Information
Technology Bangalore

upGrad

ADVANCED PROGRAMME IN

DATA SCIENCE





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ABOUT UPGRAD

upGrad has delivered over 20 million hours of learning, delivering programs by collaborating with universities across the world including Duke CE, IIT Madras, IIIT Bangalore and Deakin Business School among others.

Online education is a fundamental disruption that will have a far-reaching impact. upGrad was founded taking this into consideration. upGrad is an online education platform to help individuals develop their professional potential in the most engaging learning environment.

Since inception, upGrad has delivered over 20 million hours of learning, delivering programs by collaborating with universities across the world including Duke CE, IIT Madras, IIIT Bangalore and Deakin Business School among others.

upGrad is focused on helping working professionals in their bid to learn, grow and move up in their career through a wide-range of programs designed to improve their expertise.

IIITB is a renowned university offering programs specialising in data science, machine learning and artificial intelligence. The IIITB faculty includes an average of 15+ years of experience.

The faculty covers the conceptual depths of topics such as Data Science, Machine Learning and Artificial Intelligence, and Big Data Analytics. These will be complemented by industry relevant case studies from major industry verticals by industry leaders with 8+ years of experience from upGrad's industry network.

Furthermore, our strong placement network, industry mentorship and the credibility of an Advanced Programme will provide you with just the right push to accelerate your career in Data Science!



Ronnie Screwvala

Co-founder & Executive Chairman



“

Our aim is simple:

We strive to create

high-impact, on-campus

hands-on experiences that

prepare students for

meaningful and productive

careers.”

WHY UPGRAD



40,000+

Enrolled Learners



50+

Countries Learner Base



57%

Average Salary Hike



700+

Industry Experts, Mentors
to help learners succeed



PROGRAM HIGHLIGHTS



Certificate and Alumni Status from IIIT Bangalore

Get certified by IIITB and earn alumni status on successful completion of the program.



Dedicated Career Assistance

Receive 360 degree career support from mock interviews with hiring managers, resume building, career fairs, industry mentors and much more.



Blended Learning

Learn with the ease and flexibility of recorded sessions as well as live sessions, designed to ensure a wholesome learning experience.



For the Industry, by the Industry

Learn from 60+ industry projects and case studies, and experts who mentor you throughout the program.



Continued Learning

Optional Modules for Deep Learning, Natural Language Processing, Data Engineering and Data Generalist available for your further upskilling.



Personalised Mentorship

Get unparalleled personalised mentorship and doubt resolution from IIITB faculty and our panel of industry experts.



Career Essential Soft-Skill Program

Study the three fundamental skills of Interview & Job Search, Corporate & Business Communication, and Problem Solving. 40+ learner hours of soft skills content.



Programming Bootcamp for Non-Tech Learners

A 30-hour Python Programming bootcamp focusing on developing Basic + Intermediate Python Programming Concepts to assist non-tech learners.



FACULTY AND INDUSTRY EXPERTS



Chandrashekar Ramanathan
Dean Academics, IIITB

Prof. Chandrashekar has a PhD from Mississippi State University and experience of over 10 years in several multinational organisations.



Behzad Ahmadi
Data Scientist, Walmart Labs

Behzad Ahmadi is a PhD from New Jersey Institute of Technology. He has over 3 years of experience as a data scientist, experience with data analytics



S. Anand
CEO, Gramener

A gold medallist from IIM Bangalore, an alumnus of IIT Madras and London Business School, Anand is among the top 10 data scientists in India with 20 years of experience.



Tricha Anjali
Former Associate Dean, IIITB

Prof. Anjali has a PhD from Georgia Institute of Technology as well as an integrated MTech (EE) from IIT Bombay.



Sagar Jounkani
Senior Data Scientist, GE Healthcare

An alumnus of Georgia Institute of Technology Sagar has over 6 years of experience in data analytics in the 'US healthcare' and 'E-commerce' domains.



Rajesh Sabapathy
Director Data Science,
UnitedHealth Group

Rajesh solves hard business problems to help improve healthcare by applying Deep Learning and other Machine Learning methods in combination with Big Data technologies.





Sajan Kedia

Lead Data Scientist (Pricing), Myntra

An alumnus of IIT with over 7 years of experience at Watson at IBM Research, startups and Myntra.



Utkalika Badu

Vice President, Data Science, Gartner

An alumnus of IIM Calcutta, Utkalika has over 15 years of experience in business analytics, quantitative research and client advisory.



Dinesh Babu Jayagopi

Associate Professor, IIITB

Prof. Dinesh has a PhD from EPFL Switzerland, MSc from IISc Bangalore in System Science and Signal Processing and BTech.



Mirza Rahim Baig

Lead Business Analytics, Flipkart

Advanced Analytics professional with 8+ years of experience as a consultant in the e-commerce and healthcare domains.





UPGRAD

LEARNING EXPERIENCE



Coaching

- Student Support Team & upGrad Buddy
- Weekly real-time doubt clearing sessions
- Live Discussion forum for peer-to-peer doubt resolution monitored by technical experts
- Peer-to-peer networking opportunities with an alumni pool of 10,000+
- Lab walk-throughs of 15+ industry-driven case studies
- 6 Employability Tests for industry readiness
- Access to the program for up to 3 years



Mentorship

60+ live interactive sessions with industry experts, fortnightly personalised group (1:8) mentorship sessions and a dedicated student mentor for proactive mentoring.



Format

Online format with weekly live sessions from industry experts to help with topic walk-throughs, doubt resolution and personalised project feedback.



Hands-On Projects

60+ case studies to choose from and a Capstone Project to apply learnings.



INDUSTRY PROJECTS



IMDb Movie Analysis

Reinforce the concepts learnt in data science through this rigorous case study involving the past hundred years of movie data.



Uber Supply Demand Assignment

In this assignment, you will work on solving Uber's demand supply problem using the concepts of visualisation and EDA



Statistics Case Study

Solve a real industry problem through the concepts learnt in exploratory data analysis.



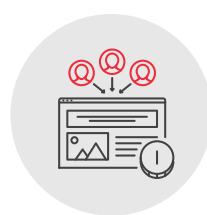
Linear Regression Assignment - Bike Sharing Systems

Build a model to understand the factors on which the demand for bike sharing systems vary on and help a company optimise its revenue.



Case Study: Lead Scoring

Help the Sales team of your company identify which leads are worth pursuing through this classification case study.



Visualisation and Storytelling Case Study

Understand how a project in the industry is taken up and solved through a comprehensive business case study.



Telecom Churn Case Study

Solve the most crucial business problem for a leading telecom operator in India and southeast Asia - predicting customer churn.



LEARNING PATH



Preparatory Course

2 Weeks

Tools: Excel



Data Toolkit

12 Weeks

Tools: Python, Excel, MySQL



Statistics and EDA

7 Weeks

Tools: Python



Analytics for Managers

6 Weeks

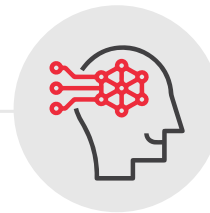
Tools: Tableau



Machine Learning - II

7 Weeks

Tools: Python



Machine Learning - I

8 Weeks

Tools: Python



Capstone Project

5 Weeks



Advanced Programme in Data Science



Receive a special **Honors Certificate** on
Getting more than 3 GPA in the program!





PROGRAM CURRICULUM

PRE-PROGRAM PREPARATORY CONTENT

Module

- Data Analysis in Excel

Description

Tutored by one of the most renowned data scientists in the country- S.Anand, CEO, Gramener- this module takes you from a beginner level Excel user to an almost professional user.

- Analytics Problem Solving

Description

This module covers concepts of the CRISP-DM framework for business problem-solving.

COURSE 1 - DATA TOOLKIT

Module

- Introduction to Python - I

Description

Build a foundation for the most in-demand programming language of the 21st century.

- Introduction to Python - II

Description

Learn to apply some of the commonly used paradigms of functional programming in Python.

- Programming in Python

Description

Learn how to approach and solve logical problems using programming.

- Data Analysis using SQL

Description

Data in companies is definitely not stored in excel sheets! Learn the fundamentals of database and extract information from RDBMS using the structured query language.



- Advanced SQL I

Description

Apply advanced SQL concepts like windowing and procedures to derive insights from data and answer pertinent business questions.

- Advanced SQL II

Description

Learn how to write optimized SQL query that require less memory and execute in lesser amount of time.

- SQL Assignment

Description

In this assignment, you will work on a movies dataset using SQL to extract exciting insights.

- Python for Data Science

Description

Learn how to manipulate datasets in Python using Pandas which is the most powerful library for data preparation and analysis.

- Visualization in Python

Description

Humans are visual learners and hence no task related to data is complete without visualisation. Learn to plot and interpret various graphs in Python and observe how they make data analysis and drawing insights easier.

- IMDb Movie Case Study

Description

Reinforce the concepts learnt in data science through this rigorous case study involving the past hundred years of movie data.

COURSE 2 - STATISTICS AND EDA

Module

- Exploratory Data Analysis

Description

Learn how to find and analyse the patterns in the data to draw actionable insights.

- Introduction to Python - I

Description

Build a foundation for the most in-demand programming language of the 21st century.



- Uber Supply Demand Assignment

Description

In this assignment, you will work on solving Uber's demand supply problem using the concepts of visualisation and EDA.

- Inferential Statistics

Description

Build a strong statistical foundation and learn how to 'infer' insights from a huge population using a small sample.

- Hypothesis Testing

Description

Understand how to formulate and validate hypotheses for a population to solve real-life business problems.

- Statistics Case Study

Description

Solve a real industry problem through the concepts learnt in exploratory data analysis.

COURSE 3 - MACHINE LEARNING I

Module

- Introduction to Machine Learning and Linear Regression

Description

Venture into the machine learning community by learning how one variable can be predicted using several other variables through a housing dataset where you will predict the prices of houses based on various factors.

- Linear Regression Assignment - Bike Sharing Systems

Description

Build a model to understand the factors on which the demand for bike sharing systems vary on and help a company optimise its revenue.

- Logistic Regression

Description

Learn your first binary classification technique by determining which customers of a telecom operator are likely to churn versus who are not to help the business retain customers.



- Tree Models

Description

Learn how the human decision making process can be replicated using a decision tree and other powerful ensemble algorithms.

- Case Study: Lead Scoring

Description

Help the Sales team of your company identify which leads are worth pursuing through this classification case study.

COURSE 4 - MACHINE LEARNING II

Module

- Unsupervised Learning: Clustering

Description

Learn how to group elements into different clusters when you don't have any pre-defined labels to segregate them through K-means clustering, hierarchical clustering, and more.

- Clustering Assignment

Description

Apply the machine learning concepts learnt to help international NGO cluster countries to determine their overall development and plan for lagging countries.

- Model Selection & General ML Techniques

Description

Learn the pros and cons of simple and complex models and the different methods for quantifying model complexity, along with general machine learning techniques like feature engineering, model evaluation, and many more.

- Business Problem Solving

Description

Learn how to approach open ended real-world problems using data as a lever to draw actionable insights.

- Telecom Churn Case Study

Description

Solve the most crucial business problem for a leading telecom operator in India and Southeast Asia - predicting customer churn.



COURSE 5 - ANALYTICS FOR MANAGERS

Module

- Structured Problem Solving using Frameworks

Description

Learn how to attack a business problem using various structured frameworks like 5W, 5WHYs, and SPIN.

- Visualisation using Tableau

Description

Learn advanced visualisation techniques using the most in-demand visualization tool in the industry.

- Data Storytelling

Description

Learn how to effectively strategise, communicate, and fine grain your data analysis projects and understand how to optimally present your findings to technical and non-technical stakeholders and upgrade your storytelling skills.

- Visualisation and Storytelling Case Study

Description

Understand how a project in the industry is taken up and solved through a comprehensive business case study.

COURSE 6 - CAPSTONE PROJECT

Module

- Capstone Project

Description

Solve an end-to-end real-life industry problem from a wide variety of domains. Available capstone project choices -

- Stock Analysis & Portfolio Management
- E-Commerce & Marketing
- Healthcare
- Supply Chain Optimisation
- Credit Card Fraud Detection
- Screen reader support enabled





OPTIONAL COURSES

Module

- Advanced Regression

Description

Take a more advanced look at regression models and learn the concepts related to regularization.

- Introduction to Neural Networks

Description

Learn the most sophisticated and cutting-edge technique in machine learning - Artificial Neural Networks or ANNs

- Introduction to Big Data

Description

This module you will learn what big data is, its various characteristics, and its determining factors. You will also get an idea of the various sources of big data and the wide range of big data applications in different industries such as retail, healthcare, and finance

- Python - OOP

Description

Learn OOP concepts such as Class, Object, Method, Inheritance, Polymorphism, Data Abstraction and Encapsulation

- Deep Learning Modules

Description

All modules for Deep Learning field of Data Science

- Natural Language Processing Modules

Description

All modules for Natural Language Processing field of Data Science

- Data Engineering Modules

Description

All modules for Data Engineering field of Data Science

- Data Generalist Modules

Description

All modules for Data Generalist field of Data Science

CAREER SUPPORT



Just-In-Time Interviews

Get company and role-specific preparation with mock interviews right before your actual interviews.



Personalised Mentorship

Get mentored by an experienced data science industry expert and receive personalised feedback with 4 calls spread over a period of 3 months.



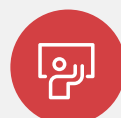
Resume Review

Obtain specific, personalised inputs on your resume structure and content.



Personalised Expert Mentorship Sessions

Career sessions are continued post graduation because we want you to have all the help you need. These include: 80 hours of live sessions with industry mentors to guide you, dedicated mentorship, and access to upGrad's career assistance resources.



Company-Specific Preparation

Get company-specific guidance with access to a carefully curated pool of interview resources per company to ensure you are interview-ready for the company of your choice.



Career Mentor

Get a dedicated career mentor to help track your weekly company application targets, coach you on your profile, and support you during your career transition journey.



OUR ALUMNI WORK AT

upGrad has a network of over 100 companies who look to recruit graduates from our programs. Some of these well-known companies include:

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CAREER TRANSITIONS



Abhishek Singh

MIS Executive (F&B)
Batch: March 2018



Senior Data Analyst, Myntra
(Oct 2019)



Ayush Modi

Associate Consultant (IT)
Batch: March 2018



Marketing Analyst,
Globalization Partners
(July 2019)



Ashish Y

Asst. Manager
(Manufacturing/Production)
Batch: Sept 2018



Business Analyst, Arvind
(Sept 2019)



Jai Krishna

Fresher
Batch: Sept 2018



Business Analyst, Quantzig
(Nov 2019)



Shadab Hussain

Data Scientist (IT)
Batch: Sept 2018



Analyst, TheMathCompany
(July 2019)



Damodar Bandi

Global Supply Chain Analyst
(Software)
Batch: Dec 2018



Sr. Business Analyst, Data
Semantics
(Aug 2019)

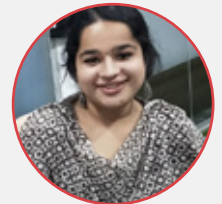


Shubhadip B

Technical Project Manager
(Tech Solutions)
Batch: June 2018



Sr. Technical Project Manager,
Aurionpro
(Oct 2019)



Deepshikha

Senior Associate (Tech)
Batch: March 2019



Data Analyst, Amazon
(Nov 2019)



Rohit W

Quality Assurance Tester (BFSI)
Batch: Jan 2019



Python Automation Engineer,
Credit Suisse
(July 2019)



Hariharan S

AVP (BFSI)
Batch: March 2018



Project Manager, HSBC
(Aug 2019)



Mohit Mangain

Internship (IT)
Batch: March 2018



Data Analyst, Shine.com
(Aug 2019)



Aakash Dusane

Software Engineer (Software)
Batch: Dec 2018



Data Scientist, Quantzig
(Aug 2019)



Sri Harsha Ravi

Principal Data
Structure Engineer (IT)
Batch: Sept 2018



Senior Data Scientist, IHS
Markit
(Nov 2019)



Sujit Nalawade

Software Engineer (IT)
Batch: Sept 2018



Data Analyst, Xoriant



Sudha Choudhary

Fresher
Batch: June 2018



Internship - AI Engineer,
Athancare
(July 2019)



Nishant Chalasany

Project Manager (Agro)
Batch: March 2019



Analytics Operations Lead,
Syngenta
(July 2019)



Ganesh Varanasi

Analyst (BFSI)
Batch: March 2018



Data Scientist, Innominds
(July 2019)



Anshul Srivastava

Business Analyst (BFSI)
Batch: Sept 2018



Associate Consultant, Fractal
(Aug 2019)



Anshul Kumar

Analyst (BFSI)
Batch: March 2019



Data Science Intern,
Merkle Sokrati
(Aug 2019)



Sylvester Pinto

Senior Software Engineer (IT)
Batch: Dec 2018



Data Associate, J.P. Morgan
(June 2019)



Ansuman Das

Risk Analyst (IT)
Batch: March 2019



Specialist Data Analyst,
Novartis
(Aug 2019)



HEAR FROM OUR LEARNERS

**Sachin Aggarwal, Experience: 18+ Years**

"Learning with IIITB and upGrad has been an experience like no other. Being an online program, you have your worries about how the program and teaching methods will be. My favourite part about the learning experience has been programming through well designed and thoughtful content shared by IIITB professors and industry experts on upGrad platforms. Kudos to upGrad."

Kunwar Alok, Experience: 15+ Years

"You may not believe it but I had never done coding in my life. I did it during this course and was thrilled to see the outcomes coming out of those codes. Just the way I used to get happy after solving a good (tough) math problem during my school age. Thanks to upGrad for providing a great service to people like us who at the age of 43 can dream to study with budding talents around."

**Sidharth Mahapatra, Experience: 3 Years**

"The concepts of R programming and Machine Learning will be taught by Prof. Chandrasekhar Ramanathan and Prof. G Srinivasaraghavan respectively. Both of them have been listed in the list of the top twenty most prominent Data Science academics published by Analytics India Magazine. So you need not worry about quality of teaching in this program."

Savita Upadhaya, Experience: 4 Years

"It has been an amazing journey with upGrad till now. Starting with their course material to live sessions to mentor support, each helps you to always be on track and progress efficiently with the Data Science course. My sincere thanks to the entire team of upGrad and Professors of IIITB for showing me the path and direction for my dream to become a Data Analyst."

**Tuhin Pal, Experience: 5 Years**

"I appreciate the platform upGrad has provided and how they have arranged modules and assignments. Modules are locked until you complete the previous one, so it feels like clearing a semester and going to the next one."

**Harkirat Dhillon, Experience: 8 Years**

"A dedicated studying regime is the key to be successful and pass the program. This program will help build a strong foundation for a successful transition into Data Science. Additionally, participating in Kaggle competitions to solve real-world problems will definitely give you an edge and land a job if one is willing to work hard."

**Shravani Shahapure, Experience: 16 Years**

"For someone who really wants to pursue a career in the field of Data Science, it is worth opting for the complete course by IIITB and upGrad. IIITB and upGrad's online program on Data Science gives many opportunities and develops students for their future as they provide the best professors, thought-provoking assignments and case studies."

Sagar Tekwani, Experience: 2 Years

"A very well-structured and well-balanced program content which you won't get in other programs/nano-degrees. Being a beginner in DS, I found the structure of the program most helpful. They even teach you most of the prerequisites with prep sessions before you even start the course. Being a working professional, it was neither too difficult nor too easy to keep up with the pace of the course."





ADMISSION PROCESS

DURATION

12 Months

FORMAT

Online

PROGRAM FEE

INR 2,60,000 (Incl. of all taxes.)

PROGRAM START DATES

Please refer to the website for program start dates.

ELIGIBILITY

Bachelor's degree, Diploma program or equivalent. Final year undergraduate students can also apply. No coding experience required.

SELECTION PROCESS



STEP 1: Selection Test

Fill out an application and take a short 17-minute online test with 11 questions.



STEP 2: Review and Shortlisting of Suitable Candidates

Our faculty will review all applications, considering the educational and professional background of an applicant and review the test scores where applicable. Following this, Offer Letters will be rolled out so you are assured a great peer group to learn and network with.



STEP 3: Enrollment for Access to Prep Content

Make a quick block payment and receive immediate access to the prep content. Begin your upGrad journey, today!

For further details,

Call to us at: **18002102020** or

Drop an email at: **admissions@upgrad.com**

upGrad

COMPANY INFORMATION

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Manchester UK