Data Science
& Analytics Bootcamp

Job Assistance

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ABOUT
UPGRAD

upGrad is an online education platform to help individuals develop their professional potential in the most engaging learning environment. With an exponential increase in demand for skilled individuals, our aim is to help working professionals upskill in emerging new-age technologies.

"Data Science & Analytics Bootcamp" aims to deliver conceptual knowledge along with hands-on experience to ensure a successful start for your career in the industry. At upGrad, we aim to leverage technology in order to transform the way education is delivered in the digital age.

Our Aim is Simple:
We strive to create high-impact, hands-on experiences that prepare students for meaningful and productive careers.

Ronnie Screwvala
Co-founder and Executive Chairman
upGrad

ABOUT THE
BOOTCAMP

The "Data Science & Analytics Bootcamp" is designed to develop complete conceptual clarity, practical skills, and an industry-grade portfolio for future Data Scientists. Even without any prior programming or math expertise, learners can enroll in this Bootcamp that features best-in-class instructor-led training, plenty of hands-on exercises and assignments with Cloud Labs.

The Data Science Bootcamp ensures that you can design and deploy databases with an understanding of SOL, Python, data analysis and statistical modeling as well as advanced concepts like deep learning, neural networks and natural language processing. Experience knowledge that extends the frontiers of Big Data to draw Insights and help businesses leverage it to drive profitability

This beginner-friendly Data Science Bootcamp is power-packed with a comprehensive curriculum designed by industry experts that lets you take on the data domain roles such as Data Analyst, Data Engineer, Data Architect, among others. Develop a job-ready portfolio and get career support with career coaching, mock interviews, and hackathons that prepare you for a fruitful career in Data Science.

CAREER PATH WITH
SALARY PACKAGES

The Data Science Career Opportunity is Unprecedented

Vice President of Data Science
  ' **1 CR**

Director of Data Science
  ' **75 LPA**

Data Scientist Manager
  ' **50 LPA**

Lead Data Scientist
  ' **30 LPA**

Senior Data Scentist
  ' **20 LPA**

Data Scientist
  ' **15 LPA**

Analyst/Insight Specialist
  ' **7 LPA**

PROGRAM
HIGHLIGHTS

165+
Hours Instructor-Led
Sessions

50+
Hours of Live Interactive
Doubt-Sloving Sessions

35
Hours of Live Master-Sessions
by Industry Experts

220
Hours of Self-Paced
Video Content

230
Hands-On Exercises
for Practice

200+
Hours of Cloud Labs-Enabled
Learning

10+
Real-World Projects for
Applied Learning

10+
Assignments and Mini
Projects

73
Auto-Graded
Assessments

15
Hours of Career
Coaching

2
Mock
Interviews

1
Hackathon

OUTCOME-BASED
IMMERSIVE LEARNING

LEARN:

Get an engaging and immersive learning experience with a focus on rich video content, detailed explanations, and interactive elements such as flashcards and quizzes to reinforce learning.

PRACTICE:

Write code directly into your browser, get expert feedback and Practice and apply what you've learned in a hands-on manner.

ASSESS:

Explore diagnostic, module-level, and final assessments. Track your skills learning progression and demonstrate your knowledge and capabilities.
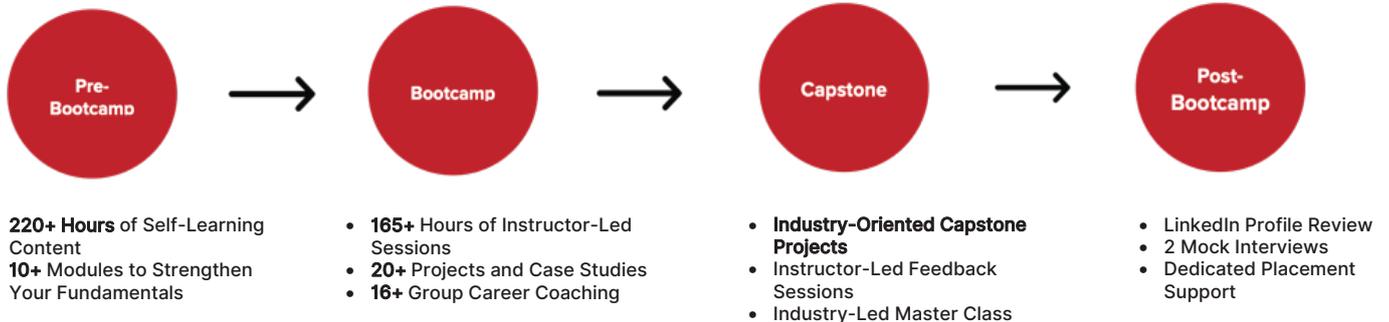
INSIGHTS:

Comprehensive reports ofler deep insights for both learners and organizations. You can assess skills progression and make informed decisions about learning strategies.
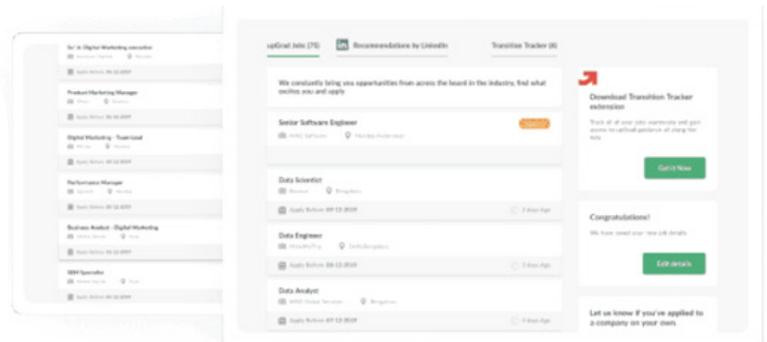
APPLY:

Gain work-like experiences through industry-grade projects designed to simulate real-world scenarios. Apply your skills and knowledge in a practical setting, similar to developers in leading tech companies.

YOUR PATH TO BECOMING A
DATA SCIENCE PROFESSIONAL

Pre-Bootcamp → **Bootcamp** → **Capstone** → **Post-Bootcamp**

- **220+ Hours** of Self-Learning Content
- **10+** Modules to Strengthen Your Fundamentals

- **165+** Hours of Instructor-Led Sessions
- **20+** Projects and Case Studies
- **16+** Group Career Coaching

- **Industry-Oriented Capstone Projects**
- Instructor-Led Feedback Sessions
- Industry-Led Master Class

- LinkedIn Profile Review
- 2 Mock Interviews
- Dedicated Placement Support

1 Programming Concepts   **2** Data Analysis   **3** Python and ML   **4** Data Engineering   **5** NLP and DSA

upGrad Placement Success Rate is 92%

- ✓ Qualified Opportunities from Top
- ✓ Organizations 100+ Open Roles Across
- ✓ Domains Across Cities 50+ New
- ✓ Companies Hiring Every Quarter
- ✓ 3X Higher Chances of Getting Interviewed

WOLVES by upGrad

upGrad Rekrut

upGrad Placement Support

PROGRAM
DETAILS

Program Duration

6 Months

Eligibility Criteria

Anyone who wants to start or advance their career in Data Science

Admission Process

Step 1:
Apply for the program

Step 2:
Complete your application

Step 3:
Clear the assessment test

Step 4:
Reserve your seat

WHY THIS
BOOTCAMP?

The Data Science Bootcamp is designed by the best industry experts to help you kickstart your tech career. The core components of our program help us stand out from all alternatives you may have.

	Video Courses	Bootcamps	upGrad
Cloud Labs	No	No	Yes
Industry projects	No	Yes	Yes
Interview Opportunity*	No	No	Yes*
Career guidance sessions	No	Yes	Yes
Mentorship	No	No	Yes
Live Doubt Solving	No	No	Yes

- **Cloud Labs** is an intelligent immersive learning platform where you can practice your codes and receive instant feedback on areas of improvement.
- **Interview Opportunity*** translates to assured placements on meeting exit criteria*.
- **Live Doubt Solving** refer to the live interactive doubt-resolutions the sessions conducted by top industry experts.

PROGRAM
CURRICULUM

MS Excel

- ✓ Formatting Concepts
- ✓ Formulas in Excel
- ✓ Statistical Analysis
- ✓ Introduction to Other Features

Programming Basics

- ✓ Basics of Programming
- ✓ Programming Concepts
- ✓ Data Storage and Files
- ✓ Operating Systems
- ✓ World of Web
- ✓ Programming Languages

SQL Basics

- ✓ What is SQL and Why is it Important?
- ✓ SQL Database Admin Commands
- ✓ The Basics of SQL Query
- ✓ Filtering Data Using WHERE Clause in SQL
- ✓ Aggregation and Summary Functions in SQL

Data Analysis Using SQL

- ✓ Miscellaneous Analysis in SQL
- ✓ Table to Table Relationship in SQL
- ✓ Combining Tables
- ✓ Advanced SQL Data Analysis
- ✓ Making Efficient Analysis

PROGRAM
CURRICULUM

Python for Data Science: Installation, Building Blocks, Strings and Data Structures

- ✓ Installation and Set Up
- ✓ Code and Data
- ✓ Building Blocks
- ✓ Strings
- ✓ Data Structures
- ✓ Flow Control

Python for Data Science: Functions, Modules, Files, Lambda functions, Errors, and OOPs

- ✓ Functions
- ✓ Modules
- ✓ Files
- ✓ Lambda functions,
- ✓ Error, and Exception
- ✓ Handling
- ✓ OOPs

Probability and Statistics: Descriptive Statistics, Distributions and Probability Theory

- ✓ Measures of Central Tendencies and Dispersion - (Mean, Median and Mode), (Variance, Standard Deviation, IQR, Skewness and Kurtosis)
- ✓ Distributions - Normal Distribution and Standard Normal Distribution, z-Scores
- ✓ Probability Theory - Simple Probability, Rule of Addition and Multiplication, Bayes
- ✓ Theorem and Law of Large Numbers
- ✓ Central Limit Theorem
- ✓ Binomial and Poisson Distributions

PROGRAM
CURRICULUM

Probability and Statistics: Hypothesis Testing, Regressions and ANOVA

- Hypothesis Testing - Intro to Hypothesis, H0, H1, Significance and P-value
- Type1 and Type 2 errors, Confidence Intervals, Margin of Error
- z-test and t-test
- Regressions
- ANOVA

Data Pre-Processing: Numpy, Pandas, RegEx and Visualizations

- Numpy
- Pandas
- Regular Expressions
- Visualization

Data Pre-Processing: Web Scraping and EDA

- Web Scraping
- EDA

NoSQL

- NoSQL and Document Databases
- MongoDB Basics
- Introduction to CRUD Operations in MongoDB
- MongoDB Drivers and Python

PROGRAM
CURRICULUM

Data Visualization with Tableau

- Introduction to Data Visualization and Tableau
- Understanding Tableau Building Blocks
- Managing Data connections
- Prepare Data for Use
- Basic Data Visualization
- Advanced Data Visualization
- Slicing and Dicing Data
- Tableau Basic Calculations
- Tableau Advanced Calculations
- Formatting
- Dashboard Designing
- Publishing and Sharing

Machine Learning: Math for Data Science

- Linear Algebra
- Calculus

Machine Learning: Linear Regression

- Introduction to Machine Learning, Supervised Vs Unsupervised, Simple Linear
- Regression - Slope, Intercept and Their Interpretation
- How to find the Beta Coefficients, OLS Method
- Multiple Linear Regression
- Model Evaluation and Model Performance Metrics for Regression
- OLS Assumptions

PROGRAM
CURRICULUM

Regularization Techniques: LASSO and RIDGE

- ✓ What is Regularization?
- ✓ Loss Function in Regularization
- ✓ LASSO Regression
- ✓ RIDGE Regression
- ✓ ELASTIC NET Regression

Introduction to Classification and Logistic Regression

- ✓ Introduction to Classification
- ✓ Different Types of Classification Techniques
- ✓ Classification Model Evaluation Metrics
- ✓ Introduction to Logistic Regression
- ✓ Revisiting Basics - Odds, Odds Ration, Log odds, Likelihood, Sigma and Logit
- ✓ Math Behind Logistic Regression
- ✓ Maximum Likelihood Estimates

KNN, Naive Bayes and SVM

- ✓ KNN Algorithm
- ✓ Naive Bayes
- ✓ Break
- ✓ Support Vector Machines

Decision Tree, Random Forest and Boosting

- ✓ Decision Tree
- ✓ Introduction to Ensemble
- ✓ Learning - Bagging
- ✓ Boosting

PROGRAM
CURRICULUM

Unsupervised Learning: Clustering and PCA

- Clustering
- Dimensionality Reduction – PCA

Big Data Processing with Hadoop

- Introduction to Big Data and Hadoop
- Hadoop Distributed File System
- Map Reduce Procedure
- Data Ingestion
- Data Processing in Hadoop
- NoSQL and HBase
- Apache Oozie
- Hadoop Cloud on Amazon/Elastic Map Reduce

Streaming Big Data with Spark: Spark Runtime, ETL, SparkSQL and Stream Processing

- Introduction to Spark (This Module is from Big Data Processing with Hadoop)
- The Spark Runtime
- ETL with Spark
- SparkSQL and DataFrames
- Introduction to Stream Processing with Spark

Streaming Big Data with Spark: Apache Kafka

- Stateful Processing with Spark Streaming
- Sliding Window Operations with Spark Streaming
- Introduction to Structured Streaming
- Introduction to Apache Kafka
- Kafka Integration with Spark Streaming

PROGRAM
CURRICULUM

- ✓ Kafka Integration with Spark Streaming
- ✓ Kafka Integration with Structured Streaming
- ✓ Introduction to Amazon Kinesis
- ✓ Using Spark Streaming with Kinesis
- ✓ Additional Spark Streaming Integrations

Machine Learning Model Deployment on Cloud

- ✓ Model Deployment
- ✓ AWS SageMaker
- ✓ Model Training
- ✓ SageMaker Real Time Inference
- ✓ SageMaker Batch Transform
- ✓ MLOps on SageMaker

Natural Language Processing: Feature Extraction, Textblob, Spacy, Text Classification

- ✓ Introduction to NLP
- ✓ Essentials of NLP
- ✓ NLP Feature Extraction
- ✓ NLP with Textblob
- ✓ NLP with Spacy
- ✓ Text Classification
- ✓ Text Summarization
- ✓ Topic Modeling

Natural Language Processing: Sentiment Analysis and Chatbots

- ✓ Sentiment Analysis
- ✓ Chatbots

PROGRAM
CURRICULUM

Deep Learning with Keras and TensorFlow: Keras, TensorFlow, and CNN

- ✓ Diving deep into Deep Learning
- ✓ Getting Started with TensorFlow
- ✓ Convolutional Neural Networks

Deep Learning with Keras and TensorFlow: Adv CNNs, NLP and GANs

- ✓ Advanced CNNs
- ✓ Natural Language Processing
- ✓ Generative Adversarial Networks (GANs)
- ✓ AI in the Real World

Data Structures and Algorithms

- ✓ Basic Techniques of Algorithm Analysis
- ✓ Linked Lists and Binary Trees
- ✓ Advanced Data Structures
- ✓ Analyze the Asymptotic Performance of Algorithms.
- ✓ Algorithmic Design Paradigms and Methods of Analysis.
- ✓ Microservices Architecture and its Implications

PROJECT
PORTFOLIO

NutriGro
Food and Drink

Build intelligence to predict users' health based on past grocery orders and recommend healthier options.

AnomaData
Manufacturing

Build intelligence to understand the health of machinery using Machine Learning and predict anomaly data/events.

For-Rest from Fires
Tools

Build intelligence using Convolutional Neural Networks to detect fire accidents in buildings and forests.

MoodForMusic
Music

Building an application that detects the mood using still images or videos and recommends the music accordingly.

VoiceBox
Productivity

Build your own virtual voice assistant using NLP and Python (on similar lines of Alexa and Siri).

Propensify
Business

Build a Propensity Model to learn how likely certain target groups customers may act under certain circumstances.

SrapIt
Business

Build intelligence using Machine Learning to predict the scrap percentage in manufacturing.

PROJECT
PORTFOLIO

DocAssist
Health and Fitness

Build intelligence to analyse patient data to help doctors decide the best treatment.
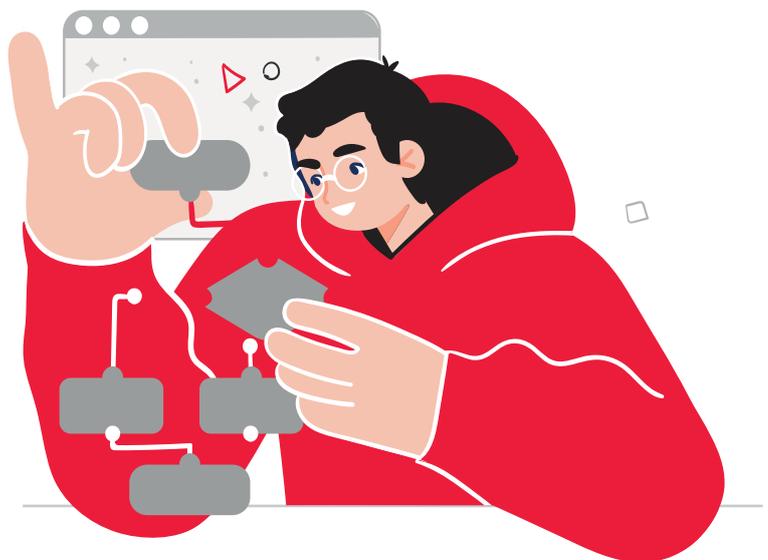
ByDefault
Banking and Finance

Build a Credit Risk Modelling Application via Machine Learning to predict a customer's creditworthiness.

Recommender
Shopping

Build intelligence to help customers discover products they may like and most likely purchase

COURSE
CREATORS

Jeffrey Aven
Principal Consultant

Big Data Solutions

Peter Henstock
Machine Learning &
AI Lead
Pfizer, Ex-Harvard

Shobhit Nigam
Program Director

KnowledgeHut

Rahul Tiwari
Data Scientist and
Co-Founder
TheScholar

Dr. Vishwakarma J.S.
Enterprise Architect, CTO

Aeries

Enes Bilgin
Stafl Machine Learning
Engineer
Ex-Microsoft, Amazon

OUR
INSTRUCTORS

Rocky Jagtiani
Master Data Science ML and AI trainer
Suven Consultants and Technology Pvt.Ltd.

Manikant Kandukuri
Senior Data Scientist

Ex Axis Solar

Jayanth MK
Data Science Engineer

Siemens Technology

Akashdeep Makkar
Senior Data Scientist

Unitedhealth Group

Urvinder Singh
Data Scientist

Colgate-Palmolive

Mohammad Shabbir Taibani
Senior Data Analyst

TomTom

OUR LEARNERS
WORK AT COMPANIES LIKE

amazon

accenture

EY Building a better working world

AXIS BANK

KPMG

Uber

IBM

Adobe

Tech Mahindra

group m

Cognizant

genpact

Capgemini

KANTAR

Flipkart

fractal
INTELLIGENCE FOR IMAGINATION

ugam
POWERING ANALYTICS
INTO ACTION

CAREER
SERVICES

Career Planning & Coaching

- Goal Setting
- Personalized Career Planning
- Career Coaching

Interview Preparation

- DS, Algo, and System Design
- Hackathons and Mock Interviews
- Interview Analysis and Feedback

Dedicated Placement Support

- Target Software Developer Roles
- Resume, LinkedIn, and GitHub Reviews
- Comprehensive Placement Assistance

TOOLS AND
TECHNOLOGIES COVERED

OUR
TESTIMONIALS

Bhupendra Choudhary

★ ★ ★ ★ ★

"My overall journey has been great. My mentor and trainer have been super supportive. They help everyone in the batch follow the curriculum seamlessly."

My overall journey has been great. My mentor and trainer have been super supportive. They help everyone in the batch follow the curriculum seamlessly. The program gets a bit di©cult when it comes to the technical / software aspects, but there's no reason to worry. In such a situation, I suggest that all the beginners put additional eflorts towards self-study and raise doubts when you feel something's incorrect so that you understand concepts fully.

To the learners like me who joined the course as beginners in the tech domain, I'd like to convey a message - you don't have to lose or be low on confidence just because you are a beginner. I assure you that upGrad has all the relevant content that you need to follow. I have myself given more than 50+ interviews, out of which I got rejected 23 times. Don't lose hope. Understand what you did wrong, make notes with the help of the course content, and implement your learnings. Once I did that, I got oflers from 15+ companies.

Austin Bernard

★ ★ ★ ★ ★

While looking to upskill myself, I found Upgrad. It was a tremendous journey over the last year. The program has helped change my perceptions of resolving problems at work. The beneficial course helped me bag a 75% hike in the data science field!

OUR
TESTIMONIALS

Amrita Surensra Bimal

★ ★ ★ ★ ★

"I enjoyed this Data Science program a lot. Most importantly for me, I learnt about Python and Data engineering-related Big Data tools."

I pursued this program to leverage my technical expertise to work as a Data Engineer and make a difference in the organization. I have 5 years of technical experience and have worked with TCS as System Engineer for around 4 years. As a part of multiple Data Integration Projects, I've extensively worked on Informatica Power center, SQL for supporting Data Extraction, Transformations, and Loading.

The PRISM platform helps with coordination of theory and practical knowledge. Overall, the program was filled with learning. I enjoyed learning from trainers who are just not successful in transferring knowledge but also come with rich industry experience.

Brajesh Chotia

★ ★ ★ ★ ★

"I relish the online sessions and understanding the content in detail. I learnt Python and Data Analysis via this program. The trainers are excellent."

I don't have any tech experience, but I was interested in the field. Having completed my Master's in Mathematics along with a course in Microsoft Excel, by reason for enrolling in this

OUR
TESTIMONIALS

Vaibhav Sah

★ ★ ★ ★ ★

After 8 years of journey, I have always wanted to continue my studies. Then after comparing multiple options, I finally chose upGrad because of the flexible timings and reviews from my colleagues. With the Pandemic grasping the nation and work-from-home changes in life, studying was not so easy. But with support from my family and experts at upGrad, I learned many things. upGrad has provided a path to learn, support for profile building, and many other opportunities that helped me transition into the field of Data Science.

Nandish Swarup

★ ★ ★ ★ ★

My journey at upgrade has been nothing but a rollercoaster ride full of fun and excitement. I was looking for ways to add some skills to my skill set but really didn't want to go through all those certificate courses which don't hold much value. This is when I heard of Upgrad's diploma program and was instantly interested in it. Their curriculum blew my mind and already being in the tech industry for the past 3 years at the time of joining I knew how much impact it would have on my career. During the course, I realized my true potential that how much I can do just by managing my time in an e©cient manner. Not only I learned new skills but came to learn a new way of working more e©ciently. I'm not gonna lie, this course was not easy. Meeting the deadlines became a headache but in the end, this is what made me feel rewarding.

upGrad

🔍 upgrad.com

For further details, **contact**

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We are available 24*7

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