

Become the
fortune teller
of your **company**

**Executive Programme in
Data Science**



Thought to ponder

43 trillion gigabytes of data will be created by 2020, according to a study by McKinsey Global Institute. Gain insight into the latest data science tools and their application in finance, health care, product development, sales and more with the Data Science and Analytics Professional Certificate program.

The Data Science for Executives Professional Certificate Program on edX.org

What You'll Learn:

- ▶ The history of data science, tangible illustrations of how data science and analytics are used in decision making across multiple sectors today, and expert opinion on what the future might hold.
- ▶ A practical understanding of the fundamental methods used by data scientists including; statistical thinking and conditional probability, machine learning and algorithms, and effective approaches for data visualization .
- ▶ The major components of the Internet of Things (IoT) and the potential of IoT to totally transform the way in which we live and work in the not-to-distant future.
- ▶ How data scientists are using Natural Language Processing (NLP), audio and video processing to extract useful information from books, scientific articles, twitter feeds, voice recordings, YouTube videos and much more.

About the programme

Why edX ?

Ivy League Certification

Professional Certification from ColumbiaX (ColumbiaX belongs to Columbia University, USA)

PEDAGOGY delivery by world class faculty

Course delivery by world class faculty from Columbia

Why Hughes ?

Interaction with Industry Experts

Hands on experience with industry relevant projects

Executive programme in Data Science will be delivered in two parts

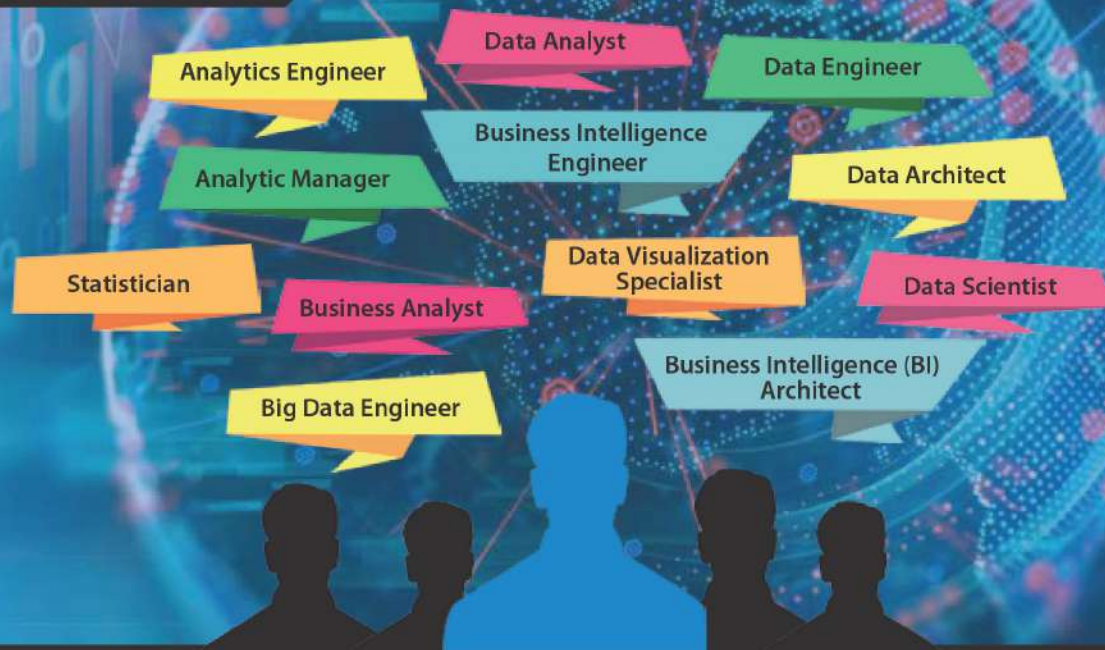
Part A- Data Science for Executives Professional Certificate program

Comprising of module 1, 2, & 3 will be taught by a distinguished team of professors at Columbia University's Data Science Institute, this program is perfect for anyone who wants to understand basic concepts in data science without getting into the weeds of programming.

Part B- Live labs and tutorials assistance by experts powered by Hughes Global Education

Additional learner support from Hughes Global Education will enable practical application and understanding on successful completion of the modules by ColumbiaX.

Career Opportunities



Job Outlook

edX and ColumbiaX report

- ▶ The use of analytics has grown exponentially in all areas, including healthcare, government, retail, e-commerce, media, manufacturing, and the service industry
- ▶ Training in data science and analytics creates a pathway to jobs like Software Developer, Systems Engineer, Network Engineer, and Systems Administrator.

Program Details

Part A- Data Science for Executives Professional Certificate program

105 Hours of asynchronous learning/ video lectures & amp; 74+ assignments

Module 1, 2 & 3 from ColumbiaX/edX

Module 1: Statistical Thinking for Data Science and Analytics

Learn how statistics plays a central role in the data science approach.

Introduction to Data Science | Statistical Thinking | Numerical Data, Summary Statistics | Different Types of Biases | Introduction to Probability | Introduction to Statistical Inference | Association and Dependence | Association and Causation | Conditional Probability and Bayes Rule | Simpsons Paradox, Confounding | Introduction to Linear Regression | Special Regression Models | Exploratory Data Analysis and Visualization Goals of statistical graphics and data visualization | Graphs of Data & Fitted Models Introduction to Bayesian Modelling | Bayesian inference | Bayesian hierarchical modelling | Bayesian modelling for Big Data

Module 2: Machine Learning for Data Science and Analytics

Learn the principles of machine learning and the importance of algorithms

Introduction to Algorithms and Machine Learning | Tools to Analyse Algorithms | Algorithmic Technique: Divide and Conquer | Divide and Conquer Example: Investing | Randomization in Algorithms Graphs | Some Ideas Behind Map Searches 1 | Application of Algorithms: Stable Marriages Example | Dictionaries and Hashing | Search Trees | Dynamic Programming Application to Personal Genomics | Linear Programming | NP-completeness | Introduction to Personal Genomics | Massive Raw Data in Genomics | Data Science on Personal Genomes Machine Learning | Algorithms in Machine Learning | Classifiers | Model Selection | Cross Validation Machine Learning Application: Introduction to Probabilistic Topic Models | Probabilistic Modelling | Topic Modelling | Probabilistic Inference | Prediction of Preterm Birth | Data Description and Preparation | Methods for Prediction of Preterm Birth | Relation Between Machine Learning and Statistics

Module 3: Enabling Technologies for Data Science and Analytics: The Internet of Things

Discover the relationship between Big Data and the Internet of Things (IoT).

Internet of Things | Wireless Communications | Wireless Standard| Networks for IoT | Securing IoT Networks | Network- ing: IoT | Embedded Systems | Interfacing with the Physical World | Energy Harvesting | Ultra Low Power Computing in VLSI | Hardware for Machine Learning | Application: Cloud Robotics|IoT Economics Inter-section of Language and Data Science| NLP| Tagging Problems, and Long-linear Models | Syntax and Parsing | Machine Translation | Audio, Video and Image Processing | Speech and Data Science | Speech Production and Perception | Recording Speech for Analysis | Exploration of Images, Videos, and Multimedia in Large Data Applications | Review of Large-Scale Visual Search and Recognition Techniques

Part B- Hughes live labs and tutorials by renowned experts from across the globe

Industry led mentoring	Tools	Job Readiness
a. Application of data science in <ul style="list-style-type: none"> IT/ITES BFSI Insurance Healthcare and Pharmaceutical 	a. Programming languages and tools <ul style="list-style-type: none"> R* Python* SQL* TensorFlow* 	<ul style="list-style-type: none"> Data Science as a Catalyst Between Technology and Business
b. Understanding consumer Analytics <ul style="list-style-type: none"> Marketing Finance Operations 	b. Big Data <ul style="list-style-type: none"> Spark* HADOOP ecosystem* 	<ul style="list-style-type: none"> Career Roadmap : Data Engineer and Data Scientist
c. Big data analytics In policy making	c. Data visualization <ul style="list-style-type: none"> Tableau* Power BI* Excel* 	<ul style="list-style-type: none"> Data Science Through Storytelling (Career Module)
d. Data governance and security		

Part C- Capstone project

- 5 case lets + 1 project
- Project mentoring and discussion
- Individual review and feedback
- Project completion certificate


Programme Fees - Total Fee (exclusive of application Fee) INR 1,00,000 + GST*


Duration - 6 months of Live Labs on edX/Columbia + 6 months Capstone Project

Days of the week - Saturday 9:00 AM to 12:00 PM & Sundays 9:00 AM to 12:00 PM

Frequency - Twice every week

Contact us 

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