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**IBM**

# IBM Data Analyst Professional Certificate

Prepare for a career as a data analyst. Build job-ready skills – and must-have AI skills – for an in-demand career. Earn a credential from IBM. No prior experience required.

Instructors: **IBM Skills Network Team** **+11 more** ✦ **New AI skills**

**Enroll for free**
Starts Nov 20

**461,415** already enrolled

Included with **coursera PLUS** • Learn more

## 11 course series

Earn a career credential that demonstrates your expertise

## 4.7 ★
(24,723 reviews)

## Beginner level
Recommended experience ⓘ

## Flexible schedule
4 months at 10 hours a week
Learn at your own pace

## Build toward a degree
Learn more

## What you'll learn

✓ Master the most up-to-date practical skills and tools that data analysts use in their daily roles

✓ Learn how to visualize data and present findings using various charts in Excel spreadsheets and BI tools like IBM Cognos Analytics & Tableau

**Enroll for free**
**Starts Nov 20**

Invoke APIs and Web Services

## Skills you'll gain

Excel Formulas   Data Analysis   SQL   Data Wrangling   Data Storytelling

Data Import/Export   IBM Cognos Analytics   Generative AI   Professional Networking

Python Programming   Data Visualization Software   Dashboard   Data Presentation

Exploratory Data Analysis   Data Visualization   Statistical Visualization

Interactive Data Visualization   Data Transformation   Microsoft Excel   Plotly   **View less skills**

## Details to know

**in**

**Shareable certificate**
Add to your LinkedIn profile

**Taught in English**
**27 languages available**

# See how employees at top companies are mastering in-demand skills

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PETROBRAS   TATA   DANONE

Capgemini   P&G   L'ORÉAL

# Prepare for a career as a Data Analyst

- Receive professional-level training from IBM
- Demonstrate your technical proficiency

**₹303,299**
median entry-level salary[1]

**26,461**
job openings in India[1]

# Professional Certificate - 11 course series  ✦ New AI skills

Prepare for a career in the **high-growth field of data analytics**. In this program, you'll learn in-demand skills like Python, Excel, and SQL to get job-ready in as little as 4 months.

Data analysis is the process of collecting, storing, modeling, and analyzing data that can inform executive decision-making, and the **demand for skilled data analysts has never been greater.**

intelligence, deep learning, or data engineering.

You'll learn the latest skills and tools used by professional data analysts including Excel spreadsheets, Python, Pandas, Numpy, Jupyter Notebooks, Cognos Analytics, and more. You'll work with a variety of data sources and project scenarios to gain practical experience with data manipulation and applying analytical skills. You'll also have the option to learn how generative AI tools and techniques are used in data analysis.

In addition to a portfolio of projects and a Professional Certificate from IBM to showcase your expertise, you'll earn an IBM Digital badge and gain access to career resources to help you in your job search.

This program is ACE® and FIBAA recommended—when you complete, you can earn up to 12 college credits and 6 ECTS credits.

Applied Learning Project

Throughout the program, you'll complete hands-on projects and labs and gain a firm grasp on the required technical skills to effectively gather, wrangle, mine, and visualize data, as well as the soft skills for working with stakeholders and storytelling with data to engage your audience.

Projects

- Import, clean, and analyze fleet vehicle inventory with Excel pivot tables

- Use car sales key performance indicator (KPI) data to create an interactive dashboard with visualizations

- Extract and graph financial data with the Pandas data analysis Python library

- Use SQL to query census, crime, and school demographic data sets

- Wrangle data, graph plots, and create regression models to predict housing prices with data science Python libraries

- Create a dynamic Python dashboard to monitor, report, and improve US domestic flight reliability

At the end of the program, you complete a real-world capstone project specifically designed to showcase your newly learned data analyst skills.

### Introduction to Data Analytics

Course details

- ✓ Explain what Data Analytics is and the key steps in the Data Analytics process
- ✓ Differentiate between different data roles such as Data Engineer, Data Analyst, Data Scientist, Business Analyst, and Business Intelligence Analyst
- ✓ Describe the different types of data structures, file formats, and sources of data
- ✓ Describe the data analysis process involving collecting, wrangling, mining, and visualizing data

**Skills you'll gain**

Data Analysis    Data Cleansing    Data Lakes    Data Visualization Software

Data Collection    Relational Databases    Statistical Analysis    Data Wrangling

Apache Spark    Data Warehousing    Microsoft Excel    Data Visualization
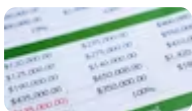
Apache Hive    Data Mart    Data Science    Analytics    Big Data

Statistical Visualization    Apache Hadoop

### Excel Basics for Data Analysis

Course 2  •  12 hours

### Data Visualization and Dashboard…

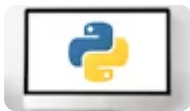Course 3  •  15 hours

Course details ⌃

**What you'll learn**

- ✓ Create basic visualizations such as line graphs, bar graphs, and pie charts using Excel spreadsheets.
- ✓ Explain the important role charts play in telling a data-driven story.
- ✓ Construct advanced charts and visualizations such as Treemaps, Sparklines, Histogram, Scatter Plots, and Filled Map Charts.

✓ Build and share interactive dashboards using Excel and Cognos Analytics.

**Skills you'll gain**

Data Visualization Software     Scatter Plots

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### Python for Data Science, AI & Development

Course 4  •  25 hours

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### Python Project for Data Science

Course 5  •  7 hours

**Course details** ∧

**What you'll learn**

✓ Play the role of a Data Scientist / Data Analyst working on a real project.

✓ Demonstrate your Skills in Python - the language of choice for Data Science and Data Analysis.

✓ Apply Python fundamentals, Python data structures, and working with data in Python.

✓ Build a dashboard using Python and libraries like Pandas, Beautiful Soup and Plotly using Jupyter notebook.

**Skills you'll gain**

Web Scraping     Python Programming     Data Manipulation     Data Analysis

Data Science     Dashboard     Matplotlib     Data Collection     Jupyter
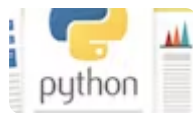
Pandas (Python Package)     Data Processing

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### Databases and SQL for Data Science with Python

Course 6  •  18 hours

## Data Analysis with Python

Course 7 • 16 hours

Course details ⌃

- ✓ Analyze real-world datasets through exploratory data analysis (EDA) using libraries such as Pandas, NumPy, and SciPy to uncover patterns and insights

- ✓ Apply data operation techniques using dataframes to organize, summarize, and interpret data distributions, correlation analysis, and data pipelines

- ✓ Develop and evaluate regression models using Scikit-learn, and use these models to generate predictions and support data-driven decision-making

### Skills you'll gain

Scikit Learn (Machine Learning Library)   Pandas (Python Package)   Regression Analysis

Exploratory Data Analysis   Data Cleansing   NumPy   Data Wrangling

Data Pipelines   Data Analysis   Data Import/Export   Data Manipulation

Predictive Modeling   Data Transformation   Statistical Analysis

Data-Driven Decision-Making   Matplotlib   Data Visualization   Feature Engineering

Python Programming

## Data Visualization with Python

Course 8 • 20 hours

⌄

## IBM Data Analyst Capstone Project

Course 9 • 26 hours

Course details ⌃

### What you'll learn

- ✓ Apply techniques to gather and wrangle data from multiple sources.

- ✓ Analyze data to identify patterns, trends, and insights through exploratory techniques.

✓ Create visual representations of data using Python libraries to communicate findings effectively.

✓ Construct interactive dashboards with BI tools to present and explore data dynamically.

Data Analysis    IBM Cognos Analytics    Data Manipulation    Scatter Plots

Data Collection    Looker (Software)    Data Wrangling    Dashboard    Web Scraping

credit at participating U.S. colleges and universities. Note: The decision to accept specific credit recommendations is up to each institution. Learn more

## Instructors

85 Courses  •  1,634,158 learners

### Dr. Pooja
IBM
4 Courses  •  371,102 learners

### Abhishek Gagneja
IBM
6 Courses  •  248,179 learners

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# Frequently asked questions

▽   **What is data analysis?**

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△   **What jobs can I get with data analytics skills?**

Data analytics skills will prove valuable in any profession. As data analytics technology develops, organizations across fields are increasingly using data to inform decision-making. This program will provide you with all the skills needed for an entry-level Data Analyst role, and will provide a strong foundation for future career development in other paths such as data science or data engineering.

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▽   **How long does it take to complete the Professional Certificate?**

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▽   **What background knowledge is necessary?**

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▽   **Do I need to take the courses in a specific order?**

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▽   **What will I be able to do upon completing the Professional Certificate?**

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▽   **Can I get college credit for taking the IBM Data Analyst Professional Certificate?**

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▽   **How do you share your proof of completion with the educational institutions for transferring credit?**

## Where can I find more information on credit recommendations? ⌄

Show less ⌃

**More questions**

? 

**Visit the learner help center**

Financial aid available, learn more

¹ Median salary and job opening data are sourced from Lightcast™ Job Postings Report.
Content Creator, Machine Learning Engineer and Salesforce Development Representative (1/1/2024 - 31/12/2024)
All other job roles (1/11/2024 - 1/11/2025)

## Skills

Artificial
Intelligence (AI)

Cybersecurity

Data Analytics

Digital Marketing

English Speaking

Generative AI
(GenAI)

Microsoft Excel

## Certificates & Programs

Google
Cybersecurity
Certificate

Google Data
Analytics
Certificate

Google IT Support
Certificate

## Industries & Careers

Business

Computer Science

Data Science

Education &
Teaching

Engineering

Finance

Healthcare

## Career Resources

Career Aptitude
Test

Examples of
Strengths and
Weaknesses for
Job Interviews

High-Income Skills
to Learn

Microsoft Power BI

Project
Management

Python

Google Project
Management
Certificate

Google UX Design
Certificate

Human Resources
(HR)

Information
Technology (IT)

Marketing

How Does
Cryptocurrency
Work?

How to Highlight
Duplicates in

Certificate

Machine Learning
Certificate

Microsoft Power BI
Data Analyst
Certificate

UI / UX Design
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PMP Certification

Signs You Will Get
the Job After an
Interview

What Is Artificial
Intelligence?

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