IBM Data Science Professional Certificate

<https://www.coursera.org/>

## Course Syllabus

## Defining Data Science and What Data Scientists Do

* Defining Data Science
* What is Data Science?
* Fundamentals of Data Science
* The Many Paths to Data Science
* Advice for New Data Scientists
* Data Science: The Sexiest Job in the 21st Century

## What Do Data Scientists Do?

* A day in the Life of a Data Scientist
* Old problems, new problems, Data Science solutions
* Data Science Topics and Algorithms
* What is the cloud?
* What Makes Someone a Data Scientist?

## Data Science Topics

* Foundations of Big Data
* How Big Data is Driving Digital Transformation
* What is Hadoop?
* Data Science Skills & Big Data
* Data Scientists at New York University
* Data Mining
* Quiz: Data Mining

## Deep Learning and Machine Learning

* What's the difference?
* Neural Networks and Deep Learning
* Applications of Machine Learning
* Regression
* Quiz: Regression

## Data Science in Business

* Applications of Data Science
* How Data Science is Saving Lives
* How Should Companies Get Started in Data Science?
* Applications of Data Science
* The Final Deliverable
* Quiz: The Final Deliverable

## Careers and Recruiting in Data Science

* How Can Someone Become a Data Scientist?
* Recruiting for Data Science
* Careers in Data Science
* High School Students and Data Science Careers

## The Report Structure

* The Report Structure
* Quiz: The Report Structure
* Final Assignment

## Professional Certificate Career Support

## Coursera Community and Career Support

As a Data Science learner on Coursera, you have access to networking opportunities in Coursera’s [Professional Certificate Community](http://bit.ly/2Ij0Kg9) and [Data Science](http://bit.ly/2VEY9VI) forums. Talk about what you’re learning, ask questions, find peers to work with on projects, and share your career goals.

## Post-Completion Career Support Services for Professional Certificates

Completing a Professional Certificate on Coursera unlocks access to a private Professional Certificate Alumni Resources community, which provides exclusive career support resources, including:

* Step-by-step **guide to ensure your success** at every stage of your job search.
* 1 year of **free access** to Big Interview’s expert video lessons, resume builder, and interactive interview practice tools (a $79/month value).
* **A network** and support of fellow completers of Coursera Professional Certificates.
* A variety of **special offers** such as career coaching, webinars, and more.

After completing your Professional Certificate, you’ll get an email telling you how to access these career support resources.

Questions? You can also always contact Coursera Careers Team by emailing [career-support@coursera.org](mailto:professional-certificate-career-support@coursera.org).

Week 1#

### Defining Data Science

## Lesson Summary

In this lesson, you have learned:

* Data science is the study of large quantities of data, which can reveal insights that help organizations make strategic choices.
* There are  many paths to a career in data science; most, but not all, involve a little math, a little science, and a lot of curiosity about data.
* New data scientists need to be curious, judgemental and argumentative.
* Why data science is considered the sexiest job in the 20th century, paying high salaries for skilled workers.

### What Do Data Scientists Do?

## Lesson Summary

In this lesson, you have learned:

* The typical work day for a Data Scientist varies depending on what type of project they are working on.
* Many algorithms are used to bring out insights from data.
* Accessing algorithms, tools, and data through the Cloud enables Data Scientists to stay up-to-date and collaborate easily.

Week 2#

### Big Data and Data Mining

Lesson Summary

In this lesson, you have learned:

* How Big Data is defined by the Vs: Velocity, Volume, Variety, Veracity, and Value.
* How Hadoop and other tools, combined with distributed computing power,  are used to handle the demands of Big Data.
* What skills are required to analyse Big Data.
* About the process of Data Mining, and how it produces results.

### Deep Learning and Machine Learning