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110+ Free Best Online Resources to Learn Data Science in 2021

Data Science is getting popular day by day. That's why everyone is trying to come to the Data Science field. But the challenge is finding the best resources to learn data science.

In this PDF, I am gonna share Best Online Resources to Learn Data Science including **Online Courses, Online Tutorials, YouTube channels, Data Science Blogs, EBooks, etc.**

Before I discuss the resources, I would like to mention the skills required in data science. So, in data science, the following skills are required-

1. **Programming Skills (Python & R)**
2. **Statistics or Probability**
3. **Machine Learning**
4. **Multivariate Calculus and Linear Algebra**
5. **Data wrangling.**
6. **Data Visualization.**
7. **Database Management**
8. **BigData**

The resources which I am gonna share in this **PDF** will cover these required skills for data science. And For your convenience, I have created separate sections for each resource. So let's start with online courses and tutorials-

Online Courses & Tutorials

1. **IBM Data Science Professional Certificate**– **Coursera**
2. **Become a Data Scientist**– **Udacity**
3. **Data Science Specialization**– **Coursera**
4. **Applied Data Science with Python Specialization**– **Coursera**
5. **Programming for Data Science with Python**– **Udacity**
6. **Data Science for Everyone**– **Datacamp**
7. **Data Scientist with Python**– **Datacamp**
8. **Data Scientist with R**– **Datacamp**
9. **Professional Certificate in Data Science**– **edX**
10. **MicroMasters® Program inData Science**– **edX**
11. **The Data Science Course 2021: Complete Data Science Bootcamp**– **Udemy**
12. **Data Science Tutorial**–**w3schools**
13. **Data Scientist Masters Program**– **Edureka**
14. **Career Path Data Science**– **Codecademy**
15. **Data Science Tutorial**– **DataFlair**
16. **Python – Data Science Tutorial**– **TutorialsPoint**

Statistics & Probability

17. **Statistics with R Specialization**– **Coursera**
18. **Statistics and probability**– **Khan Academy**
19. **Statistics with Python Specialization**– **Coursera**
20. **Learn Statistics with Python**– **Codecademy**
21. **Basic Statistics**– *Coursera*

22. **Statistics – Probability**-TutorialsPoint
23. **Statistics for Data Science and Business Analysis**– Udemy
24. **Statistical Analysis with R for Public Health Specialization**– *Coursera*
25. **Intro to Statistics**– Udacity
26. **Probability Theory, Statistics, and Exploratory Data Analysis**– National Research University Higher School of Economics
27. **Probability and Statistics**– University of London
28. **Probability and Statistics in Data Science using Python**– UCSanDiego
29. **Probability – The Science of Uncertainty and Data**– MITx
30. **Fundamentals of Statistics**– MITx
31. **STATISTICS TUTORIALS: BEGINNER TO ADVANCED**– Listen Data
32. **Probability and Statistics**– MathisFun

Programming Language

33. **The Python Tutorial**– PYTHON.ORG
34. **Python for Everybody Specialization**– University of Michigan
35. **Introduction To Python Programming**– Udemy
36. **Python Core and Advanced**– Udemy

37. **Crash Course on Python**– *Google*
38. **Python for Absolute Beginners!**– Udemy
39. **Introduction to Python Programming**– Udacity
40. **Python 3 Tutorial**– SOLOLEARN
41. **Python 3 Programming Specialization**– University of Michigan
42. **R Programming** – Johns Hopkins University
43. **Programming for Data Science with R**– *Udacity*
44. **R Programming A-Z™**– *Udemy*
45. **Python Tutorial**– W3Schools
46. **R Tutorial**– Tutorials Point
47. **R Tutorial**– Statmethods

Mathematics

48. **Mathematics for Machine Learning Specialization**– Imperial College London
49. **Mathematics for Data Science Specialization**– Coursera
50. **Data Science Math Skills**– Duke University
51. **Introduction to Calculus**– The University of Sydney
52. **Calculus 1**– Khan Academy
53. **Introduction to Calculus**-MathisFun

Data Wrangling

54. **Python – Data Wrangling– TutorialsPoint**
55. **Excel to MySQL: Analytic Techniques for Business Specialization– Duke University**
56. **Learn SQL Basics for Data Science Specialization– University of California, Davis**
57. **SQL – MySQL for Data Analytics and Business Intelligence- Udemy**
58. **Modern Big Data Analysis with SQL Specialization– Cloudera**
59. **Data Warehousing for Business Intelligence Specialization– University of Colorado System**
60. **Data Wrangling with pandas Cheat Sheet**
61. **Python Data Wrangling Tutorial: Cryptocurrency Edition– Elite Data Science**

Data Visualization

62. **Tableau Tutorial– Tableau.com**
63. **Data Visualisation with Tableau– DataCamp**
64. **Data Visualization with Tableau Specialization– University of California, Davis**
65. **Data Visualization with Python– IBM**
66. **Data Visualization– Coursera**
67. **Data Visualization– Udacity**
68. **Data Visualization– TutorialsPoint**

So, these are **online courses and tutorials**. Now I am gonna share some YouTube tutorials for Data Science-

YouTube Videos

69. **Data Science Tutorial**– **Great Learning**
70. **Data Science Full Course**– **Edureka**
71. **Data Science Full Course For Beginners**– **codebasics**
72. **Data Science Full Course**– **Simplilearn**
73. **Learn Data Science Tutorial**– **freeCodeCamp**
74. **R Programming Tutorial**– **freeCodeCamp**
75. **Statistics for Data Science**– **Great Learning**
76. **Statistics – A Full University Course on Data Science Basics**–**freeCodeCamp**
77. **Statistics Course for Data Science | Statistics Course**– **MarinStatsLectures-R Programming & Statistics**
78. **Mathematics for Machine Learning [Full Course]**–**Edureka**
79. **Machine Learning Data Pre-processing & Data Wrangling using Python**– **The AI University**
80. **Data Visualization Tutorial**– **by Krish Naik**
81. **Power BI Tutorial From Beginner to Pro**– **Avi Singh – PowerBIPro**
82. **Data Visualization Tutorial For Beginners- Simplilearn**

83. **Data Visualization with D3.js – Full Tutorial Course- freeCodeCamp.org**

Data Science Blogs

84. **DataScience.com**
85. **Edwin Chen's Blog**
86. **The Shape of Data**
87. **Machine Learning Mastery**
88. **Data Science 101**
89. **MLTUT**
90. **Planet Big Data**
91. **Big Data Blog**
92. **Data36**
93. **Towards Data Science**
94. **Simply Statistics**
95. **NYC Data Academy Blog**
96. **Chris Ablon's Blog**
97. **Algobeans**
98. **Daniel Nee's Blog**
99. **Data Blogger**
100. **Data Aspirant**
101. **Data Mining Research**

Data Science Ebooks

102. **Journey to Data Scientist: Interviews with More Than Twenty Amazing Data Scientists** by Kate Strachnyi
103. **Learn Python the Hard Way** by Zed A. Shaw **(download PDF here)**
104. **R for Data Science** by Hadley Wickham (download PDF **here**)
105. **An Introduction to Statistical Learning** by Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani (download the pdf version of this book from **here**)
106. **Probability and Statistics for Data Science** by Norman Matloff
107. **The Art of Statistics: How to Learn from Data** by David Spiegelhalter (download the PDF **here**)
108. **Data Analysis From Scratch With Python** by Peters Morgan (Download the PDF **here**)
109. **Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython** by Wes McKinney (download the PDF **here**)
110. **Data Visualization: A Practical Introduction** by Kieran Healy (download the PDF **here**)
111. **Data Visualisation: A Handbook for Data-Driven Design** by Andy Kirk (download the PDF **here**)
112. **The Data Wrangling Workshop** by Brian Lipp

Note- I hope these resources will definitely help you to learn and master data science. I would suggest you **save this PDF** for future referrals. And **share with others.**