

ONLINE DATA SCIENCE COURSE FULL-TIME (20 WEEKS)



MORINGA

Discover · Grow · Transform

IN PARTNERSHIP WITH:



FLATIRON SCHOOL



Africa's top Tech Bootcamp - Moringa has partnered with Flatiron School, to bring you a 20-week Data Science Course (Full-Time)

Introduction

Data Science is an interdisciplinary field that deploys algorithms, and other scientific methods and processes to acquire insights and knowledge from data. Many industries are now leveraging data to monitor behaviors and trends. Data Scientists are equipped with the knowledge of how to use data, tell a story, and derive insights for businesses. Did you know that Data Science Jobs are among the most sought-after roles in this century? Take the chance and learn Data Science.

This course is for those who are curious and want to work with Data to:

- Help businesses leverage data for innovation and success
- Innovate and predict future trends in business and other industries
- Learn how to analyze data, and provide data-driven insights to make decisions
- Elevate their careers or switch to Data Science in as little as 20 weeks

Why Study At Moringa?

- Practical Hands-on Learning
- Technical Mentorship
- Live instructor classes
- Learn in Community
- 1:1 Career Coaching and Graduate Support

Become a Certified Data Scientist with access to 12 months of Graduate Support to land your next career opportunity in Tech.

Who is eligible to join our Data Science Course?

This course is offered to those who are above 18 years, are ongoing or have completed university/college in any field, and have some knowledge or background in maths & statistics.

Admissions pre requisites

- Complete and submit an online application.
- Take an online assessment and score above 50%.
- Attend interview as scheduled by admissions.
- Have full-time availability for classes. That is 8.30 am to 6.00 pm from Monday to Friday
- Have a stable internet connection.
- Have a laptop (core i5 and upwards, 8GB RAM, and a minimum of 500GB memory).

Course Outline

The Data Science Course is beginner friendly and takes 20 weeks long. During the first 5 weeks, students will be introduced to the Moringa Learning platforms and Student Culture. After orientation students will deep dive into Data Science principles, Software Engineering principles, an Introduction to Python Programming, and Data Analysis & Engineering fundamentals. Later on they deep dive into 15 weeks of Advanced Data Science, Scientific Computing & Quantitative Methods, Machine Learning, Project Work, and Soft Skills for Tech Professionals.

 Duration: **20 weeks**



Learning Mode: **Live & Online**
Mon to Fri from 8am - 5pm

\$ Tuition Fees | Ksh 174,000 (USD 1740)

Fees Installment Plans Are Available

Curriculum Outline

Phase 0 - Orientation, Pre Work and Introduction to Data Science Principles (2 weeks)

During orientation, you learn more about Moringa, our policies, learning model, learning platform, classroom structure, and learning schedule.

The Data Science pre-work covers introductory Data Science concepts, Software Engineering Principles, and python programming.

Phase 1 - Data Analysis & Engineering (3 weeks)

In this phase, students will be introduced to python for Data Science. You'll learn how to use Jupyter Notebooks and be familiarized with popular Python libraries used in Data Science such as Numpy and Pandas.

What is covered

Variables, Booleans and Conditionals, Lists, Dictionaries, Looping, Functions, Data Structures, Data Cleaning, Pandas, NumPy, Matplotlib/Seaborn for Data Visualization, Git/Github, SQL, Accessing Data through APIs, Web Scraping.



Soft Skills Training (1 week)

What is covered

- Leading self
- Working with others

Phase 2 - Scientific Computing & Quantitative Methods (3 weeks)

In phase 2, students learn about the fundamentals of probability theory like combinations and permutations. At the end of this phase, students will be able to build their first data science model using linear regression.

What is covered

Combinatorics, Probability Theory, Statistical Distributions, Bayes Theorem, Sampling Methods, Hypothesis Testing, A/B Testing, Linear Regression, Model Evaluation.

Soft Skills Training (1 week)

What is covered

- Communicating for Impact
- Entrepreneurial Thinking

Phase 3 - Machine Learning Fundamentals (3 weeks)

Students learn about machine learning with a heavy focus on supervised learning. Learners get into regression analysis and logistic regression. At the end of this phase, students will be able to build and implement the most important machine learning techniques.

What is covered

Linear Algebra, Logistic regression, Maximum Likelihood Estimation, Optimization Cost Function, Pipeline Building, Hyperparameter Tuning, Grid Search, Scikit-Learn, Gradient Descent, K-Nearest Neighbors, Decision Trees, Ensemble Methods

Health Break (1 week)

Soft Skills Training (1 week)

What is covered

- Project Management
- Career Readiness

Phase 4 - Advanced Machine Learning (3 weeks)

This phase of the course focuses on a variety of Data Science techniques. Students learn about unsupervised learning techniques like clustering and dimensionality reduction. Students are introduced to threading and multiprocessing to be able to work with big data. In doing so, you'll learn about PySpark and AWS, Deep Learning, Neural Networks, and how to perform sentiment analysis.

What is covered

Dimensionality Reduction, Clustering, Times Series Analysis, Neural, Networks, Big Data, Natural Language Processing, Text Vectorization, Natural Language, Toolkit, Regular Expressions, Word2Vec, Text Classification, Recommendation Systems

Phase 5 - Final Data Science Projects (3 weeks)

In your final project, learners work individually or in groups to apply the technical and soft skills training and knowledge. Students are required to create a large-scale data science and/or machine learning project. This final project provides an in-depth opportunity for you to demonstrate your learning accomplishments.

What our graduates say...



Moringa school helped me in so many ways, but I think the most important one is the Data Science pipeline (in a nutshell). I am now able to do analysis projects with ease. I am now working for Eneza Education, an ed-tech company as a Business Intelligence Engineer. Yes! I would suggest the course to anyone who would want to pursue Data Science.

Cecilia Wanja,
Eneza Education

When I joined Moringa School, I was quite overwhelmed at first because it's fast paced and it's not like the traditional learning model I was used to. Here we have Technical Mentors who guide you through the curriculum and are there if you need any help. They encourage you to think for yourself, take initiative and they guide you with your own learning pace. See, I'm not a math person but I managed to do this as I'm surrounded by very smart and passionate people who always support me.

Through the support and consistent practice, I have been able to understand the concept of Data Science and apply it in various scenarios. It's actually a very interesting and fun concept as here, we're able to experiment with different, real life data sets.

Rose Delilah,
Moringa School



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