Call for registration: Professional Training on Python for Data Analytics

(The foundation for advancing to Machine Learning & Artificial Intelligence development)

- **Duration:** 3 Weeks (Weekend Program – 6 Days Total)

- **Venue:** UR-CST, Nyarugenge Campus (former KIST)

- **Mode:** Physical Participation Only

- **Fee:** 50,000 RWF

- **Dates:** 7TH – 22nd February 2026

- **Time:** 09:00 AM – 5:00 PM

- **Certification:** Certificate of Merit Awarded upon Successful Completion of Program

- **Registration Link:** https://dataplusrwanda.com/courses/apply/python-for-data-analysis-

---

1. Background and Rationale

In today's data-driven world, proficiency in data analytics is essential for informed decision-making across industries such as economics, agriculture, finance, health, education, and technology. Python has become a dominant tool in this space due to its simplicity, scalability, and rich ecosystem of libraries and it being a **starting point for individuals who want to advance into Machine Learning and AI development**. Yet, despite growing demand, many professionals in Rwanda and the region still lack practical training opportunities in Python-based data analytics.

To address this skills gap, **DATA+ Rwanda** is pleased to announce a **professional training program in Data Analytics Using Python**, a course inspired by the practical structure of the Microsoft curriculum on Python for data analytics. The training aims to provide hands-on experience with Python tools such as **pandas, NumPy, matplotlib, and seaborn**, empowering participants to analyze and visualize data effectively, which is fundamental for organizational data driven decision making.

Since its founding in 2021, DATA+ Rwanda has trained **more than 2000 individuals** in data science and data analytics, artificial intelligence, and project management. This Python-focused training is part of our effort to lay a solid foundation for data analytics professionals, as Python is one of the most powerful and accessible tools for modern data analytics.

2. Training Objectives

This training is designed to provide participants with robust, hands-on Python skills that are immediately applicable in both academic and professional settings. By the end of the program, participants will:

- Understand the Python environment and its role in modern data analytics.

- Learn how to load, clean, manipulate, and explore datasets using **pandas** and **NumPy**.

- Perform exploratory data analytics and extract key insights.

- Create meaningful visualizations using **matplotlib** and **seaborn**.

- Practice with regression analytics and modeling

- Complete a practical capstone project applying the full data analytics workflow.

- Gain the confidence and technical capacity to work with real-world datasets using Python.

The course is **70% practical, focusing on coding, exercises**, and real-life data challenges.

3. Who can participate

This training is tailored for professionals, academics, and students who want to develop or strengthen their skills in data analytics using Python. No prior experience in Python is required, but basic computer literacy, mathematics/ statistics and an interest in working with data are essential.

Ideal participants include:

- Any professional looking to transition into a career in data science or data analytics.

- Researchers and university students in need of data analytics skills for academic work.

- Monitoring & Evaluation officers and analysts working in NGOs, government, or the private sector.

- IT professionals and data enthusiasts interested in learning Python.

- Entrepreneurs and startup founders looking to leverage data for growth.

---

4. Core Components of the Training

The course is structured over six days (spanning three weekends), with each session dedicated to practical instruction, hands-on exercises, and real-time coding in Python. The sessions are designed to gradually build proficiency in data analytics using Python and its key libraries.

1. Introduction to Python for Data Analytics

- Setting up the Python environment (Jupyter Notebook, Anaconda, or VS Code)

- Python basics: variables, data types, functions, and control structures

- Introduction to NumPy arrays and basic operations

2. Working with Data Using Pandas

- Loading data from various sources (CSV, Excel, online URLs)

- Exploring and understanding data structures (Series and DataFrames)

- Indexing, slicing, filtering, and summarizing data

3. Data Cleaning and Preparation

- Handling missing values and duplicates

- Changing data types, formatting columns, renaming and replacing values

- Creating new variables, conditional logic, and feature engineering

4. Exploratory Data Analytics (EDA)

- Descriptive statistics (mean, median, standard deviation, etc.)

- Grouping data and applying aggregations

- Identifying trends, patterns, and potential outliers

5. Data Visualization with Matplotlib and Seaborn

- Creating visualizations: bar charts, histograms, scatter plots, box plots

- Styling and customizing plots for clarity and impact

- Visual storytelling: choosing the right chart for the right data

6. Inferential analytics and Integrated Practice Session

- Modeling and regression analytics

- Applying the full data analytics workflow using real-world datasets

- Collaborative coding exercises and guided problem-solving

- Instructor-led reviews and tips for building independent analytics skills

Each session will be interactive and practice-oriented, ensuring that participants leave with concrete skills and the ability to apply them in their work or studies.

5. Capstone Projects and Certification

After completing all sessions, participants will undertake a **capstone project**, which will require applying the full workflow taught throughout the training. This project is evaluated based on the following:

- Accuracy of data cleaning and transformation

- Insightfulness of analysis

- Clarity and aesthetics of visualizations

- Communication of results

Certification:
Participants who complete the full program and score **65% or above** on the capstone project will receive a **Certificate of Merit**, certifying their practical skills in Python-based data analytics.

6. Lead Trainer's Profile

The training will be led by **Dr. Lema Logamou Seknewna,** a highly qualified researcher and data scientist with **a PhD in Mathematics & Statistics**. He currently serves as a data scientist at the African Institute for Mathematical Sciences (**AIMS**) Rwanda and a statistician at the National Institute of Statistics of Rwanda (**NISR**). Dr. Lema brings a rich and balanced approach to teaching—combining theoretical depth with real-world application. He has successfully led numerous workshops across Africa, equipping professionals and students with practical skills in data analytics and statistical computing.

7. Investment and registration

- **Participation Fee:** 50,000 RWF

- **Mode of Payment:**

    - *Equity Bank:* 4002200779105 (DATA+ Consultant Ltd.)

    - *MOMO Pay code: *182*8*1*92570#*

- **Registration Deadline:** 3rd February 2025

- **Training Materials:** Participants will receive all slides, datasets, and code notebooks via Google Classroom for reference during and after the training.

---

8. Post-Training Community

Participants will join the **DATA+ Alumni Network**, gaining access to:

- Peer mentorship and collaboration opportunities

- Exclusive invites to future DATA+ programs and data challenges

This community ensures continued learning, networking, and growth beyond the classroom.

This hands-on training represents a unique opportunity to acquire high-demand skills in Python for data analytics. With expert instruction, real-world projects, and a strong support network, participants will leave empowered to tackle data challenges in any sector.

For inquiries and registration, contact:
✉ Email: info@dataplusrwanda.com
📞 Phone: +250 784 857 317
Office Location: 3rd floor, Ubumwe House, KG 5 Kimihurura Ave, Kigali, Rwanda.

Karara Benon
CEO, DATA+ Rwanda
Date: 10th January 2026