



PYTHON TRAINING

Python For Healthcare Course

*Learn to apply Python for data analysis, machine learning, and automation in healthcare.
Transform patient care with powerful coding skills.*

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

Computer Pride | 1st Floor, ICEA Building, Kenyatta Avenue, Nairobi | www.computer-pride.co.ke

COURSE OVERVIEW

The "Python For Healthcare Course" is an intermediate-level program designed to equip IT professionals, healthcare practitioners, and data enthusiasts with the essential Python programming skills tailored for the unique demands of the healthcare sector. This course delves into leveraging Python's robust libraries and frameworks for healthcare data analysis, patient record management, predictive analytics, and integration with various health information systems. Participants will learn to manipulate, analyze, and visualize complex healthcare datasets, enabling them to derive actionable insights that can improve patient care, operational efficiency, and medical research outcomes.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Foundations of Python in Healthcare

- Introduction to Python for healthcare applications
- Python fundamentals: data types, control structures, functions
- Setting up the Python environment for healthcare analytics (Anaconda, Jupyter Notebooks)
- Understanding healthcare data types and sources (EHRs, imaging, genomics)

02 Module 2: Healthcare Data Manipulation and Analysis with Pandas

- Data loading and cleaning techniques for clinical datasets
- Pandas DataFrames for healthcare data organization
- Data aggregation and transformation for patient outcomes and population health
- Handling missing values and data inconsistencies in medical records

03 Module 3: Visualizing Healthcare Insights

- Data visualization principles for medical data using Matplotlib and Seaborn
- Creating informative charts for trends in patient demographics and disease prevalence
- Interactive dashboards for hospital operations and public health using Plotly
- Communicating analytical findings effectively to medical professionals

04 Module 4: Introduction to Machine Learning for Clinical Applications

- Fundamentals of machine learning in healthcare (classification, regression)
- Predictive modeling for disease diagnosis and patient risk assessment using Scikit-learn
- Evaluating model performance with medical metrics (sensitivity, specificity, ROC curves)
- Ethical considerations and biases in AI/ML for healthcare

05 Module 5: Working with Specialized Healthcare Data

- Processing medical images (DICOM) with libraries like pydicom
- Introduction to Natural Language Processing (NLP) for unstructured clinical notes
- Extracting insights from electronic health records (EHR) text data
- Overview of FHIR (Fast Healthcare Interoperability Resources) and Python integration concepts

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Healthcare Data Analyst specializing in clinical or operational data**
- > **Bioinformatics Programmer developing tools for genomic and proteomic data**
- > **Health Informatics Specialist focused on system integration and data pipeline automation**

FREQUENTLY ASKED QUESTIONS

Q: What are the prerequisite skills or knowledge required before enrolling in the Python For Healthcare Course?

While this is an intermediate course, participants should have a foundational understanding of basic programming concepts, ideally with some prior exposure to Python or another programming language. Familiarity with basic statistics and a general understanding of healthcare terminology or processes will also be beneficial, though not strictly required, as core concepts will be reviewed in a healthcare context.

Q: Will this course cover how to integrate Python solutions with existing Electronic Health Record (EHR) systems or health APIs?

This course will introduce concepts related to healthcare data standards like FHIR and discuss strategies for data exchange, including how Python can interact with structured health data. While direct, real-time integration with specific proprietary EHR systems is outside the scope of this intermediate course, you will gain the foundational knowledge and skills to understand and build components that can connect with such systems or utilize their APIs for data extraction and analysis.

Q: What types of real-world healthcare projects or case studies will I work on during this course?

You will engage with practical, hands-on exercises and case studies throughout the course. These will include analyzing anonymized patient datasets to identify trends in chronic diseases, building predictive models for patient readmission risk, visualizing hospital operational efficiency data, and processing simplified medical image datasets. The aim is to provide practical experience directly applicable to challenges within the healthcare industry.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

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Take the next step in your technology career.

Location

1st Flr, ICEA Building
Kenyatta Ave, Nairobi

Email

info@computer-pride.co.ke

Phone

+254 705 900 900

www.computer-pride.co.ke