



PYTHON TRAINING

Ai Solutions Global Challenges Python Course

Develop AI solutions using Python to address global challenges. Master cutting-edge techniques for real-world impact.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

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- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level Python course, 'AI Solutions for Global Challenges', is meticulously designed to equip aspiring and current IT professionals with the practical skills needed to leverage Artificial Intelligence for addressing some of the world's most pressing issues. Over two intensive hours, participants will dive deep into using Python, coupled with popular AI/ML libraries, to develop data-driven solutions for real-world problems such as climate change, public health crises, sustainable development, and social inequality. The course emphasizes hands-on application, ethical considerations in AI, and the effective interpretation of complex datasets to drive impactful change.

By focusing on practical problem-solving and project-based learning, this course empowers learners to transition from theoretical knowledge to tangible AI development. You will learn to identify relevant data sources, implement robust data preprocessing techniques, build and evaluate machine learning models tailored to specific global challenges, and understand the implications of your AI solutions. The professional benefits extend beyond technical proficiency, fostering a mindset of innovation, critical thinking, and social responsibility, positioning you as a valuable asset in organizations committed to leveraging technology for good.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Introduction to AI for Global Challenges

- Defining Global Challenges amenable to AI solutions
- Overview of AI's role in sustainable development goals (SDGs)
- Ethical considerations and bias in AI for social impact
- Case studies of successful AI implementations in global challenges

02 Module 2: Python for Data Acquisition and Preprocessing

- Review of intermediate Python for data manipulation
- Utilizing APIs to gather real-world data (e.g., climate, health, economic indicators)
- Data cleaning, normalization, and feature engineering with Pandas and NumPy
- Handling missing data and outliers in diverse datasets

03 Module 3: Building Predictive Models for Impact

- Introduction to supervised learning algorithms (Regression, Classification) with Scikit-learn
- Developing models for climate prediction, disease outbreak forecasting, or resource allocation
- Feature selection and dimensionality reduction techniques
- Understanding model interpretability for critical applications

04 Module 4: Evaluating and Deploying AI Solutions

- Metrics for model evaluation in social impact contexts (e.g., precision, recall, F1-score)
- Cross-validation and hyperparameter tuning for robust models
- Introduction to model deployment strategies (e.g., basic API endpoints)
- Communicating AI results and limitations to non-technical stakeholders

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **AI/ML Engineer specializing in Humanitarian Technology**
- > **Data Scientist for Environmental Sustainability**
- > **Solutions Architect for Public Health Informatics**
- > **Impact Analyst for Non-Profit Technology Initiatives**

FREQUENTLY ASKED QUESTIONS

Q: What specific global challenges will I learn to address with AI in this course?

This course focuses on teaching you the methodology and Python tools to tackle a range of global challenges. You'll work with datasets and scenarios related to climate change (e.g., predicting environmental patterns), public health (e.g., disease spread modeling), and sustainable resource management (e.g., optimizing resource distribution). The emphasis is on transferable skills applicable to various UN Sustainable Development Goals.

Q: What are the prerequisite Python skills required for this intermediate course?

To get the most out of this course, participants should have a solid intermediate understanding of Python. This includes proficiency with fundamental data structures (lists, dictionaries, sets), control flow (loops, conditionals), functions, object-oriented programming basics, and experience with libraries like Pandas and NumPy for data handling. Prior exposure to basic statistical concepts or machine learning terminology is beneficial but not strictly required, as key concepts will be reviewed in context.

Q: How will this course help me contribute to real-world AI impact roles?

This course is designed to bridge the gap between theoretical AI knowledge and practical, impactful application. You'll gain hands-on experience in the entire AI pipeline – from problem identification and data acquisition to model development, evaluation, and ethical considerations – all within the context of global challenges. This practical experience, combined with a focus on problem-solving for social good, directly prepares you for roles that demand not just technical skill, but also a strategic mindset for applying AI to create positive change in humanitarian, environmental, and public sector organizations.

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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READY TO ENROL?

Take the next step in your technology career.

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