AI CERTs®

AI+ Environment Practitioner™

Certification



Executive Summary

The AI+ Environment Practitioner™ certification equips learners with the knowledge and practical skills to apply AI to environmental monitoring, conservation, and sustainable resource management. The program explores environmental science foundations, satellite imagery, IoT sensors, data quality, machine learning, computer vision, biodiversity conservation, pollution monitoring, sustainable agriculture, climate risk prediction, disaster response, and ethical AI practices.

Learners develop practical understanding of how environmental data becomes useful evidence through classification, forecasting, visualization, and decision support. The certification emphasizes Hands-on activities, interpretation of environmental indicators, responsible data use, model limitations, and human oversight. Case studies and guided workflows connect AI capabilities with decisions that support ecosystem protection, resource efficiency, community resilience, and sustainable development.

Prerequisites

- **Environmental Awareness:** Understand basic environmental concepts, including ecosystems, biodiversity, pollution, climate change, conservation, and sustainability.
- **AI Fundamentals:** Recognize basic AI and machine learning concepts and their potential applications in environmental monitoring and decision support.
- **Data Literacy:** Understand basic data types, spreadsheets, charts, data quality, and the interpretation of environmental measurements and trends.
- **Mathematics and Statistics Awareness:** Understand percentages, averages, comparisons, correlations, and basic measures used to interpret environmental data and model results.
- **Digital Tool Familiarity:** Be comfortable using web applications, uploading datasets, navigating maps and dashboards, and following guided analytical workflows.
- **Responsible AI Awareness:** Recognize the importance of privacy, fairness, transparency, human oversight, and the environmental impacts of digital technologies.

Exam Blueprint

Number of Questions

50

Passing Score

35/50 or 70%

Duration

90 Minutes

Format

Online via AI Proctoring platform

Question Type

Multiple Choice/Multiple Response

Exam Overview

Module	Weight
Introduction to AI & Environmental Science	7%
Environmental Data Ecosystem & Ethics	15%
AI for Biodiversity Conservation and Wildlife Monitoring	14%
AI for Pollution Monitoring & Environmental Impact	14%
AI for Sustainable Agriculture & Land Use	14%
AI for Climate Risk Prediction & Disaster Response	12%
Ethical AI in Environmental Applications	12%
AI Solutions for Environment	12%
	100%

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Certification Modules

Module 1

Introduction to AI & Environmental Science

1.1 Introduction to Environmental Science

1.2 AI's Role in Environmental Monitoring

1.3 Global Frameworks & Governance

1.4 Case Study: AI for Monitoring Deforestation

Module 2

Environmental Data Ecosystem & Ethics

2.1 Sources of Environmental Data

2.2 Data Quality, Bias & Ethics

2.3 Case Study: AI for Smart Farms in Jharkhand, India

2.4 Hands-on Activity: Air Quality Data Visualization and AI-Driven Insights

Module 3

AI for Biodiversity Conservation and Wildlife Monitoring

3.1 AI for Species Identification and Habitat Tracking

3.2 AI for Ecosystem Health Monitoring

3.3 Case Study: AI for Birds

Module 4

AI for Pollution Monitoring & Environmental Impact

4.1 AI for Air Quality Monitoring

4.2 AI for Water Quality and Pollution Control

4.3 Case Study: AI for Pollution Control

Module 5

Environmental Data Ecosystem & Ethics

5.1 AI for Land-Cover Classification

5.2 Sustainable Agriculture with AI

5.3 Case Study: AI for Deforestation Prevention

Module 6

AI for Climate Risk Prediction & Disaster Response

6.1 AI for Climate Risk Prediction

6.2 AI for Disaster Management

6.3 Case Study: AI for Flood Forecasting

Module 7

Ethical AI in Environmental Applications

7.1 Ethical AI Considerations in Environmental Applications

7.2 Responsible AI Practices for Environmental Policy

7.3 Case Study: AI for Responsible Energy

Module 8

AI Solutions for Environment

8.1 AI-Driven Sustainability Solutions

8.2 AI for Real-World Environmental Challenges

8.3 Case Study: AI-Powered Pest and Disease Prediction for Sustainable Agriculture

Additional Module

AI Agents For Environment Practitioner

1.1 AI Agents for Environment Practitioner

Certification Outcome

Upon completing the AI+ Environment Practitioner™ course, learners will be able to explain environmental AI applications, identify suitable data sources, interpret satellite and sensor data, recognize biodiversity and pollution patterns, and assess how AI supports sustainable agriculture, climate risk prediction, and disaster response. They will be able to complete guided workflows for land-cover change analysis, species classification, pollution visualization, and environmental dashboard development.

Participants will understand how to evaluate data quality, recognize bias and uncertainty, interpret model outputs, and apply fairness, privacy, transparency, and human oversight in environmental decision-making. They will also be able to discuss AI's environmental footprint and relate practical environmental applications to responsible resource management and relevant Sustainable Development Goals.



Market Insight

Environmental monitoring increasingly combines satellite observations, connected sensors, and AI analysis to support conservation, pollution management, and climate action. These applications call for practitioners who can interpret environmental data, assess the reliability of AI outputs, and communicate findings responsibly. The course addresses this combination of environmental understanding, digital analysis, and ethical judgment.



Value Proposition

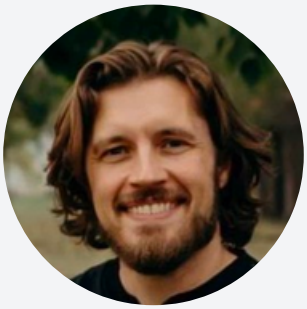
The certification connects environmental science with accessible AI tools and practical analytical workflows. Learners gain a structured foundation in environmental data, remote sensing, biodiversity monitoring, pollution analysis, sustainable farming, climate risk, and responsible AI. Guided activities develop the ability to interpret evidence and communicate insights that support environmental decisions.



Additional Features

The course includes environmental case studies, module-level knowledge checks, guided simulations, and Hands-on activities using QGIS, IQAir AirVisual, Teachable Machine, Google Sheets, Google Earth Engine, Google Flood Hub, Global Forest Watch, Looker Studio, and Make.com. Activities include satellite change analysis, species classification, pollution heatmaps, flood risk visualization, forest loss and carbon emissions analysis, and dashboard integration with weather and air quality APIs.

AI Experts



Jason Kellington

AI Expert

As a consultant, trainer, and technical writer with more than 25 years of experience in IT, I specialize in the development and delivery of solutions focused on effective and efficient enterprise IT.



Justin Frébault

AI Expert

I'm a boutique data consultant specializing in data mesh and lakehouse solutions. I've dedicated my career to helping organizations transform their approach to data, moving beyond mere knowledge.



J Tom Kinser

AI Expert

I have over forty years of experience in software development, data engineering, management, and technical training. I am a Microsoft Certified Trainer and a software developer, holding multiple certifications.



Terumi Laskowsky

AI Expert

Country Manager for Global Consulting Services in Japan, Specialties: Information Security (Compliance, Policy, Application, Host, Network)

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