



AI+ Pharma Practitioner™

Certification



Executive Summary

The AI+ Pharma Practitioner Certification equips professionals with cutting-edge knowledge at the intersection of artificial intelligence and pharmaceutical sciences. It explores AI-driven innovations in drug discovery, clinical trials, precision medicine, and healthcare data analytics. Participants gain practical insights into applying machine learning, predictive modeling, and automation to enhance R&D efficiency and regulatory compliance. Designed for pharma executives, researchers, and healthcare technologists, the certification empowers learners to leverage AI for improved patient outcomes, optimized drug pipelines, and strategic decision-making in the evolving life sciences landscape. It bridges technical expertise and pharmaceutical domain knowledge for transformative industry impact.

Prerequisites

- **Basic Biology Knowledge** – Understand fundamental human biology concepts.
- **Pharmaceutical Fundamentals** – Familiarity with drug development and approval processes.
- **AI & ML Basics** – Grasp core principles of artificial intelligence.
- **Data Analytics Skills** – Ability to interpret and analyze datasets.
- **Ethical Awareness** – Understand ethics in AI-driven healthcare applications.

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
AI Foundations for Pharma	7%
AI in Drug Discovery and Development	15%
Clinical Trials Optimization with AI	15%
Precision Medicine and Genomics	15%
Regulatory and Ethical AI in Pharma	12%
Implementing AI in Pharma Projects	12%
Future Trends and Sustainability in Pharma AI	12%
Capstone Project	12%
	100%

The logo for AI CERTs, featuring a stylized 'AI' icon followed by the text 'CERTs' with a registered trademark symbol.

AI CERTs®

AI⁺
Pharma
Practitioner™



Certification Modules

Module 1

AI Foundations for Pharma

1.1 AI and Machine Learning Basics

1.2 AI Algorithms and Models

1.3 Use Case: Predictive Modeling for Adverse Drug Reactions
and Drug-Drug Interactions Using Historical Patient Datasets

1.4 Hands-on: Build Predictive Models Using No-Code Tool (Teachable Machine)

Module 2

AI in Drug Discovery and Development

2.1 AI in Molecular Drug Design

2.2 AI in Drug Repurposing

2.3 Use Case: AI-Driven Drug Repurposing Successes (COVID-19 Therapeutics)

2.4 Hands-On: Practical AI-Driven Molecular Design and Drug Repurposing Using Orange Data Mining Tool

2.5 Hands-On 2: Exploring Disease-Drug Associations with EpiGraphDB

Module 3

Clinical Trials Optimization with AI

3.1 AI-Enhanced Patient Recruitment

3.2 Clinical Data Management and Monitoring

3.3 Use Case: Pfizer's AI-Driven Analytics for Optimizing Clinical Trials

3.4 Hands-on: Implementing Clinical Data Analytics Using No-Code Platforms (KNIME)

Module 4

Precision Medicine and Genomics

4.1 Personalized Treatment Strategies

4.2 Biomarker Discovery

4.3 Case Study: AI-Assisted Biomarker Discovery and Validation in Cancer Treatments

4.4 Hands-on: Hands-On Genomic Analysis – Exploring AI-Driven Genomic Interpretation Using CBioPortal

Module 5

Regulatory and Ethical AI in Pharma

5.1 Ethical Considerations and AI Governance

5.2 AI Compliance and Regulatory Frameworks

5.3 Case Study: Analyzing Ethical and Regulatory Challenges Encountered in Major AI-Driven Pharma Initiatives

5.4 Hands-on: Developing AI Governance Strategies Based on Ethical Frameworks

5.5 Hands-on: Literature Mining with LitVar 2.0

Module 6

Implementing AI in Pharma Projects

6.1 AI Project Management

6.2 Evaluating AI Tools and ROI

6.3 Hands-On: Practical AI Project Management Using Airtable for Tracking, Collaboration, and Management

Module 7

Future Trends and Sustainability in Pharma AI

7.1 Emerging AI Technologies in Pharma

7.2 AI for Sustainable Healthcare

7.3 Case Study: Analysis of Sustainability Initiatives Driven by AI in Pharmaceutical Industry Leaders

7.4 Hands-on: Scenario Planning and Predictive Analytics Using Dashboards for Future-Focused Decision Making

Module 8

Capstone Project

8.1 Capstone Project 1: Predictive Modeling for Adverse Drug Reactions in Polypharmacy

8.2 Capstone Project 2: AI-Enhanced Clinical Trial Recruitment and Retention

8.3 Capstone Project 3: AI-Powered Drug Design for Rare Diseases

8.4 Capstone Project Evaluation Scheme

Additional Module

Future Trends and Sustainability in Pharma AI

9.1 What are AI Agents?

9.2 How Does an AI Agent Work in the Pharma Value Chain

9.3 Core Characteristics of AI Agents

9.4 Importance of AI Agents (General + Pharma)

9.5 Significance of AI Agents in Pharma

9.6 Types of AI Agents?

9.7 Applications and Trends in Pharma

9.8 Case Study: Accelerated Lead Optimization with a Generative AI Agent

9.9 Hands-on Lab

Certification Outcome

Upon completing the AI+ Pharma Practitioner Certification, participants gain a comprehensive understanding of how artificial intelligence transforms pharmaceutical innovation and healthcare delivery. Learners develop expertise in AI-driven drug discovery, clinical trial optimization, precision medicine, and ethical AI governance. They acquire practical skills in predictive modeling, data analytics, and project implementation using real-world tools and case studies. The certification empowers professionals to integrate AI solutions within pharmaceutical operations, enhance decision-making, and promote sustainable, data-driven healthcare practices. Learners emerge equipped to bridge technology and life sciences, driving innovation, compliance, and efficiency in the evolving global pharmaceutical and biotechnology landscape.



Market Insight

The global pharmaceutical industry is rapidly adopting AI to accelerate drug discovery, streamline clinical trials, and enhance patient outcomes. This growing demand creates a strong need for professionals skilled in integrating AI within pharma operations and research.



Value Proposition

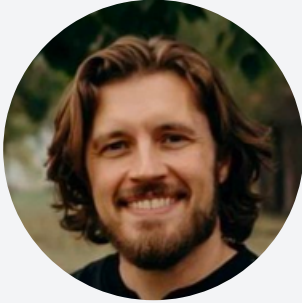
The AI+ Pharma Practitioner Certification bridges pharmaceutical expertise and AI innovation, equipping learners with applied skills to lead digital transformation in healthcare. It delivers industry-relevant tools, case studies, and methodologies aligned with emerging pharma technology trends.



Additional Features

The program includes hands-on projects, real-world case studies, expert-led sessions, and no-code AI tools. Learners gain practical experience applying AI in pharma contexts, supported by continuous mentorship and globally recognized certification credentials.

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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