The Essential AI Practitioner
The Key to Framing AI Implementation

Why Attend

The Need for the AI Practitioner

Organizations that want to extract real value from AI need skilled practitioners who can transform strategic visions into functioning systems. An AI Practitioner ensures that models are designed, trained, validated, and deployed effectively, reducing risks of wasted investment or technical failure. They provide the technical backbone for AI initiatives, ensuring scalability, security, and performance across platforms. With their expertise, organizations can accelerate adoption of AI-driven automation, reduce costs, and unlock new opportunities in analytics and decision support.

The AI Practitioner requires specific implementation skills for managed AI transformation.

The AI Business Analyst vs AI Practitioner

Application Development Practitioner: *Implementing Application Solutions*.

The Application Development Practitioner specializes in integrating and configuring pre-existing software applications to meet specific business requirements. These professionals are experts in the functionality and architecture of particular enterprise systems, such as ERP, CRM, or other business software. They work closely with stakeholders to understand their workflows and configure the application's settings, modules, and user interfaces accordingly.

Artificial Intelligence Practitioner: *Implementing AI Models and Analytics*

An AI Practitioner designs and deploys intelligent systems that automate decisions, generate insights, and optimize operations. They handle data preprocessing, algorithm selection, model training, and integration. Working closely with analysts and engineers, they ensure AI solutions are accurate, ethical, and scalable. Their role spans technical rigor and strategic alignment, enabling organizations to operationalize AI effectively. They are the architects of intelligent transformation, translating data into action.

Business Value of AI Practitioner

AI Practitioners are the builders of intelligent infrastructure. Without them, AI strategy remains theoretical. They ensure models are robust, explainable, and compliant. Their technical expertise transforms raw data into predictive power, enabling automation, personalization, and strategic foresight. In a competitive landscape driven by intelligence, AI Practitioners are indispensable. They future-proof operations, unlock efficiencies, and deliver scalable innovation. Investing in them is investing in resilience, agility, and long-term growth.

The Essential AI Practitioner
The Key to Framing AI Implementation

Learning Objectives

Blending traditional efficiency with AI-driven foresight, organizations create a powerful dual approach that maximizes operational stability while preparing for future challenges and competitive disruptions. Professionals who attend this course can expect to learn how to apply the most recent innovative developments in AI Business Analytics and their uses, specifically:

- Describe the key emerging AI analytics in use today.
- Explain the difference between AI business analysis and traditional business analysis
- Choosing among AI alternatives for the best decision result
- Explain how 'easy to use' AI analytics can help a manager.
- Applying data structure analytics to AI opportunities
- Identify when to use specific AI analytics for organization performance.
- Know when to position the AI analytics at process decision points.
- Verify that the AI analytic is providing management insight.
- Comparing the results of multiple AI analytics as applied to a decision.
- Using AI analytics to predict what might happen next.

This professional training session provides a hands-on, skill-oriented working knowledge of the emerging innovative analytic techniques that managers and analysts should consider and use. The learning approach uses discussions, interactive exercises, and group exercises that focus on outcomes that lead to organization success. Participants can apply this learning as soon as they get back to their office.

What techniques will you learn?
Some of the analytics topics covered in this course are Deep Learning, Machine Learning, Neural Nets, Portfolio Ranking, Affinity Recommendation Technique, Correlation, Regression, Ranking with Correlation Matrices, Sentiment and Keyword Analytics, Semantic Comparisons, Semantic Inference, Alignment Analytics, and Impact Analysis.

Where can you use these techniques?
Innovative analytics supports multiple needs of an organization from strategy to operations including such issues as choosing alternatives, process performance, consolidation and context, organization change impact, project portfolio analysis, context analysis of strategies, data, applications and processes, organization alignment, and more.

Who should attend?
Managers, Process Analysts, Business Analysts, Managers, Professionals, IT Specialists, IT and Business Architects.

To Contact Knowledge Consultants, Inc. email requests to kci-info@knowledgebiz.com

The Essential AI Practitioner
The Key to Framing AI Implementation

Day One

Day 1 Theme: Linking to AI Business Analysis

The hot topics today are digital transformation, neural nets, generative AI, and machine learning. All of these are a part of business analysis. Digital transformation requires thinking about analysis and analytics that leverage all the digital data collected. Tools that support and enable analytics help with the everyday decisions all organizations make. The focus today is applying analysis with emerging analytics to key decisions.

Section 1 – AI Practitioner Method Overview

- Scoping the situation
- Understanding the problem/opportunity
- Data collection and preparation
- Model development
- Training and evaluating the model
- Training and deployment

Video and Discussion: AI Solution Development

Section 2 – Practitioner Capability Skills

- AI Analytical Methods
- Machine learning an development languages
- Statistics and Probability
- AI Modeling
- Project Management
- AI Platforms
- User interactions

Exercise: What AI capabilities do you Have?

Section 3 – A Practitioner Tool Set

- Agent platforms
- AI workflow platforms
- AI Development Languages
- Gen AI platforms
- AI Analytical Software

Mini-Case and Discussion: What are the AI enablement opportunities?

The Essential AI Practitioner
The Key to Framing AI Implementation

Day Two

Day 2 Theme: Developing Models

Models are the heat of work for the AI Practitioner. The AI business analyst provides initial guidance on the model strategy, the practitioner implements and tests the models for quality and usefulness. Based on the problem or opportunity, one or more algorithms can be identified and used. The list comes from the AI business analyst and is the starter point for the practitioner. Algorithm use overlaps the data types of structured, semi-structured and unstructured. In many cases two models are suggested as A/B approach to selections.

Section 4 – Input from AI Business Analysts

- Solution Profile and Opportunity definition
- AI Linkage points (independent or process linked)
- Model(s) required
- Data for the models
- Performance expectation
- User Expectations

Video an Discussion: AI Solution Modeling

Section 5 – Identifying Model Data

- Data Structure Strategy
  - Structured
  - Semi-Structured
  - Unstructured
- Data type Determination
  - Objective data – Structured data in tables
  - Subjective data - preference and criteria
  - Hybrid data – blended data types

Video and Discussion: Semi-Structured Data Analysis.

Section 6 – Selecting Algorithms

- Exploratory analysis algorithms
- Structured data Algorithms
  - Correlation/Regression
  - Cluster Analysis
  - Predictive Neural Net
- Semi-Structured Algorithms
  - Unstructured algorithms, Gen AI, Phrase analytics

Mini-Case: Selecting an algorithm

The Essential AI Practitioner
The Key to Framing AI Implementation

Day Three

Day 3 Theme: Data Acquisition and AI Asset Management

It is not enough to source and use data and algorithms. AI assets must be managed for best value to an organization. An AI information repository combines is a centralized, organized, and governed repository where an organization stores, manages, and catalogs its diverse AI assets. The AI Information Repository is a curated, secure repository that stores reusable AI datasets, metadata, preprocessed features, model outputs, and annotations for AI development and business analytics.

Section 7 – Sourcing Data

- Planning the data acquisition effort
- Gathering Objective Data
  - External data
  - Internal Data
- Gathering Subjective data
  - Relationship matrices
  - Criteria spreadsheets
- The data quality need

Exercise: Creating a Subjective Spreadsheet

Section 8 –- Data Preparation

- Data ingestion from multiple sources
- Data cleaning and de-duplication
- Feature engineering
- Data partitioning (train/test/validate)
- Bias detection and correction
- Data Transformation

Exercise: Predictive Analytics with Neural Nets

Section 9 – AI Information Repository

- Repository contents:
  - Cleaned and transformed datasets
  - Test and synthetic data sets
  - Anomaly and event data
  - AI Models
  - AI Test Models

Mini - Case: Selecting Data Sets for Analytics

The Essential AI Practitioner
The Key to Framing AI Implementation

Day Four

Day 4: Theme: AI Practitioner Capabilities

Investing in AI Practitioner capabilities is essential for future-proofing your organization. Investing in the capabilities of an AI Practitioner is the single most critical step to unlocking the true potential of your data. Their expertise enables scalable solutions that reduce costs, enhance customer experience, and unlock new revenue streams. As AI evolves practitioners must master ethical deployment, model governance, and cross-functional collaboration.

Section 10 – AI Workflow and Ensemble Analytics

- Neural Network Ensembles
- Multi-Agent Systems
- Reinforcement Learning Agents
- Hybrid Models
- Anomaly Detection Ensemble
- Generative AI Agent
- Time-Series Ensembles

Exercise – Where can you use ensemble analytics

Section 11 – AI Solution Deployment

- Data Drift
- Scalability & Latency
- Data Quality
- Compute Cost and overruns
- Legacy integration
- Security Vulnerabilities

Mini - Case: What issue do you have?

Section 12 –Emerging AI Capabilities

- Technology forecasting methods
- What technologies are emerging or evolving?
    - Generative AI
    - Autonomous AI Agents
    - Cognitive AI
    - Decision Intelligence
    - Chaos Application
    - Explainable AI

Exercise – Using Gen AI for Trending Future Capabilities

The Essential AI Practitioner
The Key to Framing AI Implementation

Day Five

Day 5 Theme: AI Practitioner Management

An AI roadmap guides the evolution of the AI capability of an organization. It begins with defining vision and goals, assessing readiness, and identifying high-impact AI opportunities. The roadmap integrates workforce upskilling, data modernization, and continuous model improvement. It aligns AI initiatives with core business objectives, ensuring efforts focus on real value. The roadmap begins by assessing current AI technical operations readiness and prioritizing a portfolio of use cases based on impact and feasibility.

Section 13 – Practitioner Roadmap

- Vision Definition
- Current State Assessment
- Identify & Prioritize Use Cases
- Technology Planning
- Pilot Project Selection
- Create a Phased Implementation Plan

Exercise:

Section 14 – IT Relationship

- High-Performance Computing (HPC):
- Cloud Infrastructure
- Technical Troubleshooting
- Data Integration Services
- Model Hosting & Deployment
- End-User Enablement
- Security & Governance

Exercise: –

Section 15 – At the End of the Day…

- Know where you are
- Know where you are going
- Track the AI landscape changes
- Anticipate change
- Evaluate value and ROI

Video and Discussion: Advent of Chaos Analytics

Course Questions and Wrap