

Transforming Your Business with AI & GenAI

Duration: 05 days

Course Outcomes

- Understand the ethical and sustainable integration of AI in businesses.
 - Gain practical knowledge of AI tools and their business applications.
 - Learn to manage AI and ML projects effectively.
 - Explore advanced AI technologies and prepare for future trends.
 - Develop actionable strategies for implementing AI in their organization.
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Day 1: Foundations of AI and Its Business Impact

Module 1.1: Introduction to AI in Business

- Overview of Artificial Intelligence (AI).
- Current Trends and Use Cases in AI Across Industries.
- Importance of AI in Business Strategy.

Module 1.2: AI Fundamentals

- Understanding Intelligent Agents.
- Modern Approach to Human Logical Thinking (Robert Dilts' Model).
- Basics of Machine Learning (ML): Learning from Experience (Tom Mitchell's Definition).

Module 1.3: Ethics and Trustworthy AI

- Definition and Importance of Ethics in AI.
- Human-Centric Ethical Purpose in AI Development.
- Introduction to Sustainability and AI's Role in Universal Design.

Interactive Activities

- **Case Studies:** Successful AI Implementations (e.g., Netflix's Personalization, Walmart's Inventory Optimization).
 - **Group Discussions:** Ethical Challenges and Opportunities.
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Day 2: Deep Dive into AI Applications

Module 2.1: Exploring AI Applications

- AI in Various Sectors: Hypothesis Testing, Forecasting, and Prototyping.
- Bridging Technical Insights to Business Decision-Making.

Module 2.2: Types of Machine Learning and Business Perspectives

1. **Supervised Learning**
 - Applications: Fraud Detection, Sales Forecasting.
2. **Unsupervised Learning**
 - Applications: Customer Segmentation, Anomaly Detection.
3. **Reinforcement Learning**
 - Applications: Dynamic Pricing, Supply Chain Optimization.
4. **Semi-Supervised Learning**
 - Applications: Content Moderation, Medical Imaging.
5. **Deep Learning**
 - Applications: Autonomous Driving, Natural Language Processing.

Module 2.3: Machine Learning in Practice

- Key Components of a Prediction Machine.
- Differentiating Correlation from Causation.
- Typical Data Preparation Tasks.

Module 2.4: AI and Robotics

- Introduction to Robots and Robotic Paradigms.
- Intelligent Robots: Relationship with AI Agents.

Interactive Activities

- Hands-On Data Visualization Exercises.
 - Group Work: Analyzing AI Solutions for Real-World Scenarios.
 - **Case Studies:**
 - **Supervised Learning:** Amazon's Recommendation Engine.
 - **Unsupervised Learning:** Spotify's Playlist Generation.
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Day 3: Implementing AI Projects

Module 3.1: Managing AI Projects

- Differences Between AI Projects and Traditional IT Projects.
- Defining "AI Solvable" Business Questions.

Module 3.2: External Expertise in AI Implementation

- Innovations in Outsourcing AI Development.
- Building Teams of Models for Effective Collaboration.

Module 3.3: Challenges and Risks in AI Projects

- Ethical Challenges and Limitations of AI Systems.
- Risks of AI Projects and Best Practices for Mitigation.

Interactive Activities

- **Industry Expert Session:** Identifying and Executing AI Business Opportunities.
 - **Workshop:** Formulating Effective AI Project Questions.
 - **Case Studies:** Lessons from AI Implementation Failures.
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Day 4: Advanced AI Technologies and Generative AI

Module 4.1: Latest Developments in AI

- Multi-Modal AI: Integrating Text, Images, and Videos.
- Vector Databases and Fine-Tuning for Enhanced Performance.

Module 4.2: Generative AI: Concepts and Applications

- Understanding Generative AI (e.g., GPT-4, ChatGPT).
- Practical Use Cases of Generative AI in Business.

Module 4.3: Retrieval-Augmented Generation (RAG) and SQL Chat

- Implementing RAG in Business Scenarios.
- Data Interactions Using SQL.

Interactive Activities

- **Hands-On:** Generative AI Tools.
 - Practical Exercises with Multi-Modal AI.
 - **Case Studies:**
 - OpenAI's Use of GPT for Conversational AI.
 - Data Retrieval with RAG for Business Analytics.
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Day 5: The Future of AI in Organizations

Module 5.1: Comparing Machine Learning Approaches

- Correlation vs. Causation: Tools and Frameworks.
- Limitations of Current AI Techniques.

Module 5.2: Ethical and Logistical Challenges

- Privacy and Fairness in AI.
- Implications for Organizational Design.

Module 5.3: The Management of AI Teams

- Roles and Responsibilities in AI Projects.
- Agile Approaches to Learning from Experience.

Module 5.4: Future Trends and Sustainability in AI

- AI's Role in the Fourth Industrial Revolution.
- United Nations Sustainability Goals and AI Integration.

Interactive Activities

- **Panel Discussion:** Future of AI and Organizations.
 - **Strategy Workshop:** Designing an AI Roadmap for Businesses.
 - **Case Studies:** AI Transformations in Sustainable Development.
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