INSTITUTE OF MANAGEMENT & INFORMATION TECHNOLOGY

AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE
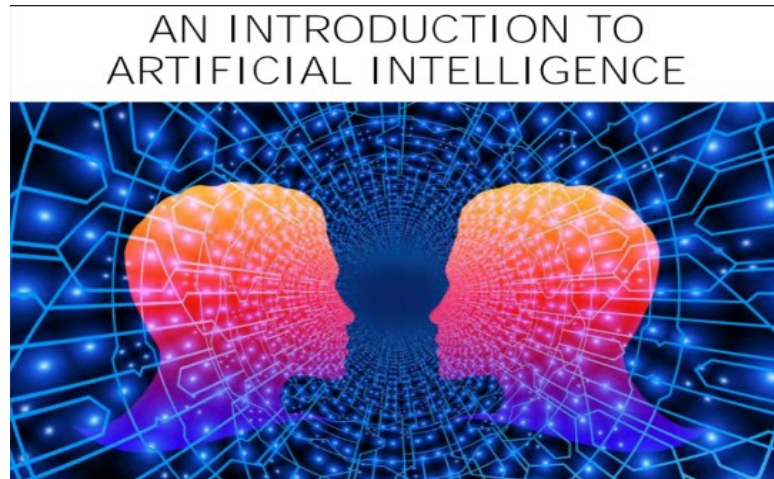
Online Course
AI ENABLED
WORKFLOW OPTIMIZATION

1.   Introduction

This online course AI ENABLED WORKFLOW OPTIMIZATION explores how Artificial Intelligence (AI) can streamline and optimize workflows across industries. Students will learn to analyze processes, integrate AI solutions, and create adaptive, intelligent workflows that boost efficiency and innovation and transform operations.

2.   Position of this course

The online course AI ENABLED WORKFLOW OPTIMIZATION is offered by IMIT (Institute of Management and Information Technology) for their accredited HBO course Business ICT Management (BIM). for both specializations: Computer Infrastructure Management (CIM) and Business Management and ICT (BMI).

3.   What is AI Enabled Workflow/Process Optimization?

AI enabled process optimization uses artificial intelligence and machine learning to enhance business processes, improving efficiency, reducing costs, and making better decisions. It involves automating tasks, analyzing data, and providing insights to streamline workflows and achieve operational goals.

4.   Key Aspects AI Enabled Workflow/Process Optimization

Benefits: COMPACT

- **Automation:** AI can automate repetitive tasks, freeing up human resources for more strategic work.
- **Data Analysis:** AI algorithms can analyze large datasets to identify patterns, trends, and insights.
- **Improved Decision-Making:** AI can provide data-driven recommendations.
- **Streamlined Workflows:** By automating and optimizing processes.
- **Reduced Costs:** Improving resource utilization, and streamlining operations.

Examples:

- **Customer Service:** AI chatbots can handle customer inquiries, reducing the workload on human agents.
- **Supply Chain Management:** AI can optimize logistics, leading to reduced costs and increased efficiency.
- **Fraud Detection:** Can help businesses protect their assets.

Challenges:

EXAMPLES OF AI IN MANUFACTURING

- **Data Privacy:** Ensuring the privacy and security of data used by AI
- **Workforce Adaptation:** Businesses to prepare for AI automation.
- **Algorithm Bias:** AI algorithms can be biased, leading to unfair or inaccurate results. It's important to ensure that AI algorithms are fair and unbiased.
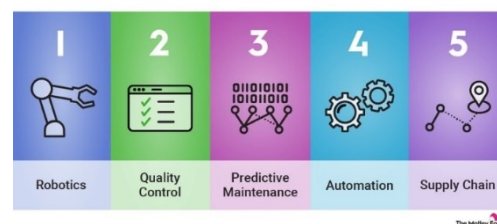
5. Entry level AI Enabled Workflow Optimization

The online course is a level 2 course. In principle, this online course is programmed as a 2nd year course. Students should realize that this is an intensive course that requires a lot of self-study.

6. Learning objectives AI Enabled Workflow Optimization

By completing this course, students will be able to:

1. Understand fundamental AI concepts and automation frameworks.
2. Identify and map processes suitable for AI optimization.
3. Apply machine learning models for decision-making.
4. Orchestrate intelligent workflows using low-code/no-code.
5. Measure and refine AI-optimized workflows.
6. Anticipate and leverage future trends and cognitive AI.
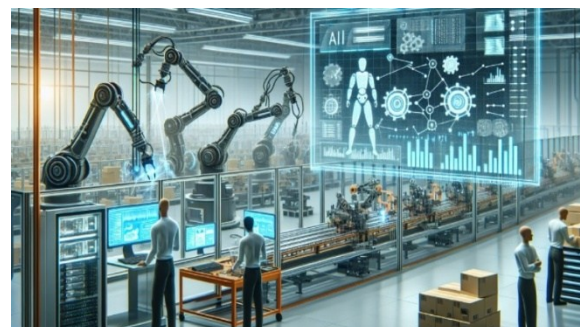
1. **AI and Data Science Competence**
   - Machine Learning (ML): Understanding supervised, unsupervised, and reinforcement learning.
   - Process Mining: Skills to discover, monitor, and improve processes.
   - Model Interpretability: Especially important because workflows often need transparent justifications.
2. **Domain-Specific Process Knowledge**
   - Business Process Management (BPM):
   - Lean, Six Sigma, Agile:
   - Industry-Specific Workflows:
3. **IT Infrastructure and Systems Knowledge**
   - Enterprise Systems: Knowledge of ERP
   - Cloud Platforms: AWS, Azure, or GCP
   - Integration and Automation Tools:
4. **Change Management Skills**
   - Stakeholder Management:
   - Digital Transformation Strategies:
   - Ethical and Regulatory Awareness: Knowing privacy laws and how they impact workflow data.
5. **Soft Skills**
   - Problem Framing and Requirements Analysis:
   - Communication Skills:
   - Critical Thinking:

   - **This domain needs people who understand AI tech, how business workflow's function, how to manage change, and how to bridge between technical and business teams.**

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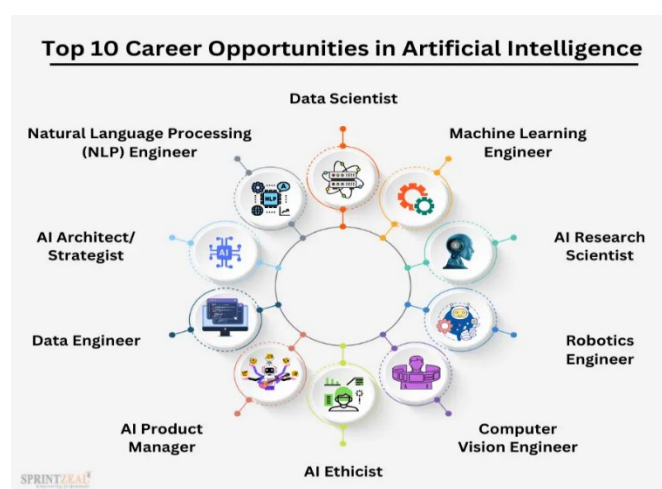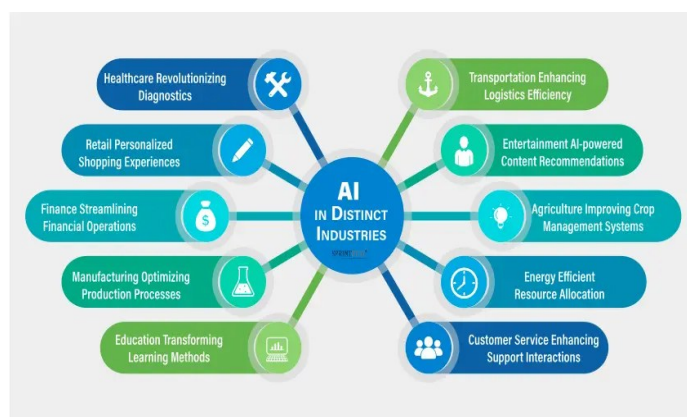
7.   AI Enabled Workflow Optimization Study Plan

	Date	Course/subject	Material
		Course 1: Introduction to AI and Intelligent Automation	
		Course 2: Process Mapping and Automation Discovery	
		Course 3: Machine Learning for Workflow Prediction and Decision-Making	
		Course 4: Intelligent Workflow Orchestration and Tools	
		Course 5: Measuring and Optimizing Workflows	
		Module 6: Cognitive Automation and Future Trends	
		Presentation final assignment	

8.   Study load

The study load for the online course AIWO is 8 ECTS (European Credit Transfer System), or 224 hours.
The pass-mark for all final examination subjects is 5.5

INVESTMENT USD 700   ALL IN

*Minimum Technical Requirements * Laptop i5+ / 8+ GB memory / Free Disk space 500 GB*

8.   About the trainer

Ton Pijpers MBA started his professional career in 1986 as an employee/advisor Administrative Organization (AO), innovation advisor and (financial) controller in the Dutch social security sector (SFB/GAK, now UVW). Ton has worked in social security for a total of 10 years. In the years 1996-2011 Ton has been working as an external advisor, management consultant, project leader, program manager, interim manager and trainer/coach at the French/Dutch company Atos. Ton has been a Principal Consultant at the Atos division of Atos Consulting in the years 2005-2011. From Atos Ton has been deployed at many different companies in the private sector, but also at government organizations. In the period 2011-2022 Ton worked with Assuria N.V., the no. 1 insurance company in Suriname, in the role of Policy Administration Manager (2011-2018) and Claims Manager Medical (2018-2022). During his career at Assuria Ton followed all Assuria product training courses. This ultimately involved countless training courses in the field of fire, liability, medical insurance, Management etc.

IMIT
Dr. Ing. Urwin W. Staphorst MBA

AIWO is an integral part of the IMIT education program accredited by the "National Orgaan voor Accreditatie" NOVA. IMIT is recognized by The Ministry of Education, Science and Culture.

SUBJECT TO CHANGES 1.8.25