Faysal Aziz

Digital Transformation for a Sustainable Future

FA-0176 · two-day

DevOps, Cloud & Infrastructure · Data & Analytics

Introduction

Integrating AI, Big Data, and Cloud Computing

Mastering Modern Industry Practices to Drive Sustainable Innovation

In an era where sustainability and digitization are at the forefront of industry innovation, the ability to harness advanced technologies like Machine Learning (ML), Artificial Intelligence (AI), Big Data, and Cloud Computing is crucial for any organization looking to stay competitive. This two-day intensive course is designed to guide professionals through the interconnected world of modern data practices and digital tools that are revolutionizing industries.

By exploring the relationships between AI, Big Data, and Cloud Computing, participants will learn how to implement sustainable practices that not only boost efficiency and innovation but also pave the way for long-term success. With over 30 years of industry experience, the instructor will provide real-world insights and practical skills, ensuring that participants can immediately apply what they learn to drive sustainable digital transformation in their own organizations.

Learning outcomes

By the end of this course, participants will be able to:

- Understand the foundational concepts of Machine Learning, Artificial Intelligence, Big Data, Cloud Computing, and their roles in modern industry.

- Analyze how these technologies interconnect to drive digital transformation and sustainable business practices.
- Apply data management and governance strategies to ensure data integrity and compliance in digital projects.
- Design and implement data preparation techniques to optimize analytics workflows.
- Utilize cloud computing platforms for scalable and sustainable big data processing.
- Integrate AI and ML into business processes to enhance decision-making and operational efficiency.
- Develop a roadmap for transitioning to modern, sustainable industry practices using advanced digital tools.

Prerequisites

- Basic understanding of data concepts and IT infrastructure.
- Familiarity with common business processes and challenges in industry settings.
- Prior exposure to cloud computing or AI/ML concepts is beneficial but not required.

Training outline

1. Introduction to Digital Transformation and Sustainability

- Overview of digital transformation in modern industries.
- The importance of sustainability in today's business landscape.
- The role of technology in achieving sustainable practices.

2. Foundations of Machine Learning (ML) and Artificial Intelligence (AI)

- Definitions and key concepts of ML and AI.
- How ML and AI are used in industry: Case studies and examples.
- Introduction to AI/ML tools and platforms.

3. Big Data: Harnessing Data for Competitive Advantage

- What is Big Data? Understanding its characteristics (Volume, Variety, Velocity, Veracity).
- The role of Big Data in modern industries: Examples of application.
- Tools for Big Data processing and analysis (e.g., Apache Hadoop, Apache Spark).

4. Cloud Computing: The Backbone of Digital Transformation

- Introduction to Cloud Computing and its service models (IaaS, PaaS, SaaS).
- How Cloud Computing supports Big Data, AI, and ML initiatives.
- Comparison of leading cloud platforms (AWS, Google Cloud, Microsoft Azure).
- Sustainable cloud practices: Reducing carbon footprints through cloud solutions.

5. Data Governance and Management: Ensuring Data Integrity and Compliance

- The importance of data governance in the digital age.
- Key principles of data governance: Data quality, privacy, and security.
- Developing a data governance framework for your organization.
- Tools and technologies for data management (e.g., Data catalogs, ETL tools).

6. Data Preparation: The Foundation of Effective Analytics

- Understanding the data preparation process: Cleaning, transforming, and enriching data.
- Techniques for efficient data preparation: Automation, data wrangling.
- Tools for data preparation (e.g., Alteryx, Talend).
- The impact of proper data preparation on AI and ML outcomes.

7. Analytics: Turning Data into Actionable Insights

- Introduction to analytics: Descriptive, Predictive, and Prescriptive.
- How analytics drives decision-making in industries.
- Case studies: Successful analytics implementation in various industries.
- Tools for analytics (e.g., Tableau, Power BI).

8. Integration of AI, ML, Big Data, and Cloud for Sustainable Practices

- How to integrate AI, ML, Big Data, and Cloud into existing business processes.
- Building an interconnected data ecosystem: Best practices.
- Sustainable industry solutions: Leveraging digital tools for eco-friendly practices.
- The future of digital transformation: Emerging trends and technologies.

9. Creating a Roadmap for Digital Transformation

- Assessing your organization’s readiness for digital transformation.
- Steps to develop a tailored digital transformation strategy.
- Monitoring and measuring the success of digital initiatives.
- Overcoming challenges in the transition to modern industry practices.

10. Case Studies and Real-World Applications

- In-depth exploration of industry case studies where AI, ML, Big Data, and Cloud have driven sustainable innovation.
- Lessons learned and best practices from successful digital transformation projects.

11. Interactive Workshop: Designing Your Own Digital Transformation Strategy

- Participants will apply what they have learned to design a digital transformation strategy for their organization.
- Group discussions and presentations of strategies for peer and instructor feedback.

This course provides a comprehensive and hands-on exploration of the technologies and strategies essential for driving sustainable digital transformation in modern industries. Whether you are looking to upskill or lead your organization into the future, this course offers the knowledge and tools to make it happen.

© 2026 Faysal Aziz · Kuala Lumpur