With the support of the Erasmus+ Programme of the European Union

FOReSiGHT

SYLLABUS

Course Title: Algorithmic Governance for Business- Advanced

Course Description:

Algorithmic Governance for Business - Advanced is an advanced course that explores the application of computer algorithms to decisions and decision-making processes in businesses. The course covers topics such as data-driven governance, artificial intelligence, machine learning, automated resource management, and computational decision-making. Participants will gain critical insights into the challenges and opportunities associated with algorithmic governance in business.
The course refers to dynamic ecosystems as a potential business application for algorithmic governance and uses Haier as a case study.

Course Objectives:

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

- Understand the principles and methodologies behind algorithmic governance in business contexts.
- Analyze the potential benefits and challenges of implementing algorithmic governance.
- Apply knowledge of data-driven governance, AI, ML, and computational decision-making to real-world business scenarios.
- Evaluate the role of dynamic ecosystems in the realm of algorithmic governance.
- Critically assess the Haier case study to understand algorithmic governance's practical implications and outcomes in a global business setting.

Key Topics:

1. Introduction to Algorithmic Governance
    - Definition and Evolution
    - Importance in Modern Business
2. Data-Driven Governance
    - Principles of Data-Driven Decision Making
    - Tools and Techniques
    - Benefits and Limitations
3. Artificial Intelligence and Machine Learning in Governance
    - Basics of AI and ML for Decision Making
    - Predictive Analytics and Proactive Governance
    - Ethical Considerations
4. Automated Resource Management
    - Principles of Automation in Resource Allocation
    - Tools for Automated Resource Management

- Challenges in Automation

5. Computational Decision-Making
    - Algorithmic Decision Trees and Logic
    - Computational Models for Business Scenarios
    - Limitations of Computational Decision-Making
6. Dynamic Ecosystems in Algorithmic Governance
    - Understanding Dynamic Ecosystems
    - Role of Algorithms in Managing Dynamic Ecosystems
    - Case Study: Haier's Application of Algorithmic Governance
7. Challenges and Opportunities in Algorithmic Governance
    - Ethical, Social, and Business Challenges
    - Future Trends and Opportunities

Course Materials:

Course Slides

Proposed Assessment:

1. **Quizzes (30% of final grade)**
    - Objective: Test participants' understanding of topics.
    - Format: Multiple-choice, true/false, and short-answer questions.
2. **Group Discussions (20% of final grade)**
    - Objective: Encourage collaborative learning and exchange of diverse perspectives.
    - Format: Online discussion forums with weekly prompts related to key topics.
    - Assessment: Participants will be graded on the quality of their contributions and engagement with peers.
3. **Case Study Analysis: Haier (25% of final grade)**
    - Objective: Assess participants' ability to apply course concepts to a real-world business scenario.
    - Format: Participants will analyze the Haier case study and submit a written report detailing their insights, recommendations, and rationale.
4. **Final Project (25% of final grade)**
    - Objective: Participants will design an algorithmic governance model for a chosen business or industry.
    - Format: Written report detailing the model, its benefits, challenges, and potential impact.
    - Assessment: Projects will be graded on feasibility, depth of understanding, and creativity.