## Summary of L1 Luce DIA By L2 Mathias VANNESTE

Al optimizes processes across various domains by analyzing large datasets to identify patterns, predict outcomes, and automate tasks, leading to enhanced productivity, reduced costs, and improved decision-making. In manufacturing, Al identifies inefficiencies, suggests productivity improvements, and predicts equipment failures for proactive maintenance. Automation of repetitive tasks frees up human workers for complex activities, while continuous learning and adaptation facilitate ongoing process optimization.

Ethically, responsible AI deployment demands unbiased, diverse data and transparency about algorithms and decision-making processes.

Technologically, AI requires advanced algorithms and robust computing infrastructure to process large datasets effectively.

Ecologically, while AI can enhance resource efficiency and minimize environmental impact, its energy use and data storage have potential negative consequences.

Ensuring ethical, transparent, and sustainable Al application necessitates guidelines, regulations, and multidisciplinary collaboration to address privacy, fairness, and environmental challenges.