

Data Science, AI, Machine Learning

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Abstract: *In the age of information overload, data science (DS), artificial intelligence (AI), and machine learning (ML) have emerged as the cornerstones of technological advancement. This paper delves into their distinct roles while highlighting their synergistic relationship. We explore how DS provides the foundation for AI and ML by extracting knowledge from data. We then examine AI's role in simulating human intelligence and defining objectives for ML algorithms. Finally, we delve into the mechanics of ML, exploring its various paradigms and their applications across diverse fields. The paper concludes by discussing the ethical considerations and future directions of this powerful trio.*

Keywords: Data Science, Artificial Intelligence, Machine Learning, Deep Learning, Neural Networks, Natural Language Processing, Computer Vision, Big Data Analytics, Supervised Learning