Dr. SNS RAJALAKSHMI COLLEGE OF ARTS & SCIENCE (Autonomous)

Coimbatore -641049

Accredited by NAAC(Cycle–III) with 'A+' Grade
(Recognized by UGC, Approved by AICTE, New Delhi and
Affiliated to Bharathiar University, Coimbatore)

DEPARTMENT OF COMPUTER SCIENCE

III YEAR / VI SEMESTER

Unit I – Basic Terminology in Artificial Intelligence

Topic 1: The Machine Intelligence Continuum

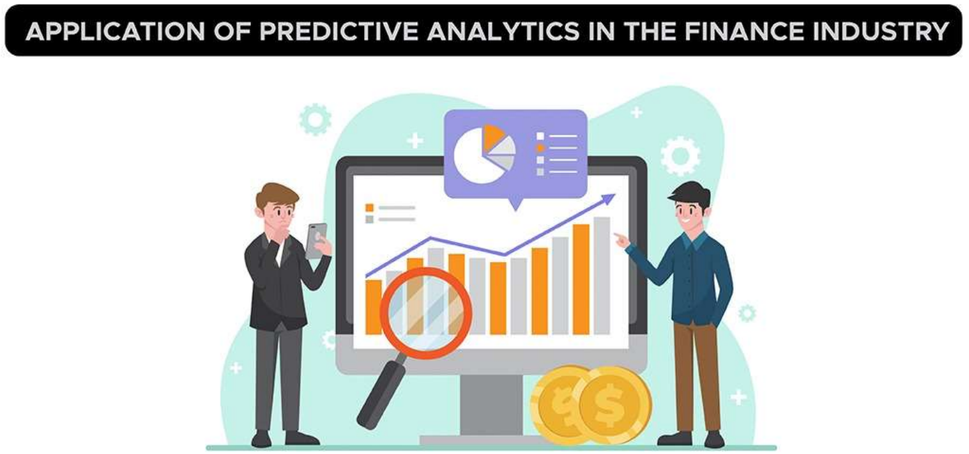
The Machine Intelligence Continuum

The Machine Intelligence Continuum offers a structured way to understand and apply AI across various domains:

Systems That Act: These are AI systems designed to perform based on predefined rules or instructions. For instance, automated systems in manufacturing or basic chatbots can fall under this category.

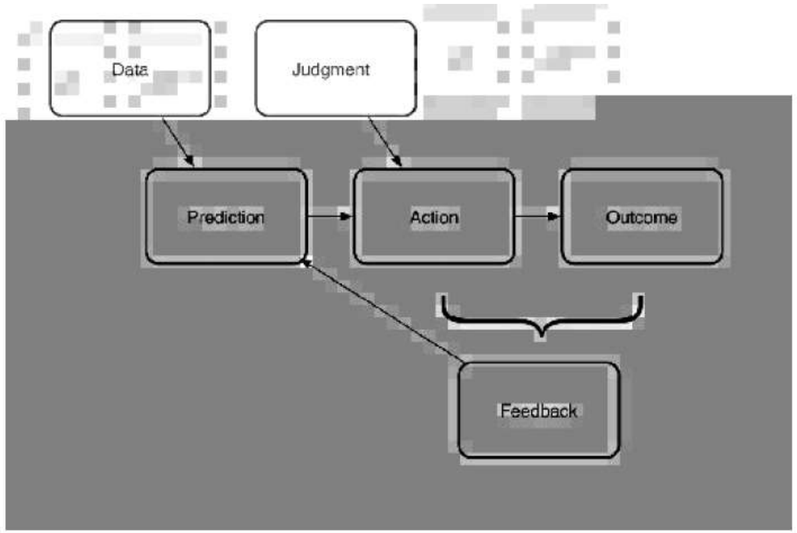
The Machine Intelligence Continuum

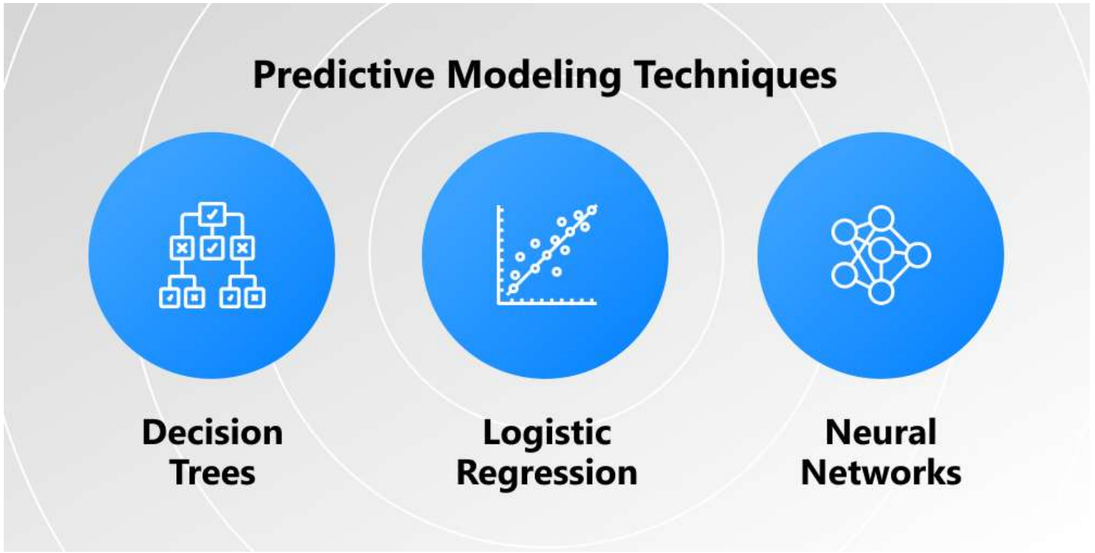
Systems That Predict: These AI systems use historical data to forecast or anticipate future outcomes. Applications include predictive analytics in finance, weather forecasting, or even recommendation systems in e-commerce.



The Machine Intelligence Continuum

Systems That Learn: This involves AI systems that improve their performance by learning from data. Machine learning models, such as neural networks or decision trees, fall into this category. These systems can recognize patterns, make decisions, and improve accuracy over time.





The Machine Intelligence Continuum

Systems That Create: AI systems that can generate content or create new outputs fall under this category. This includes AI-generated art, music, or even content creation tools that assist writers or designers.

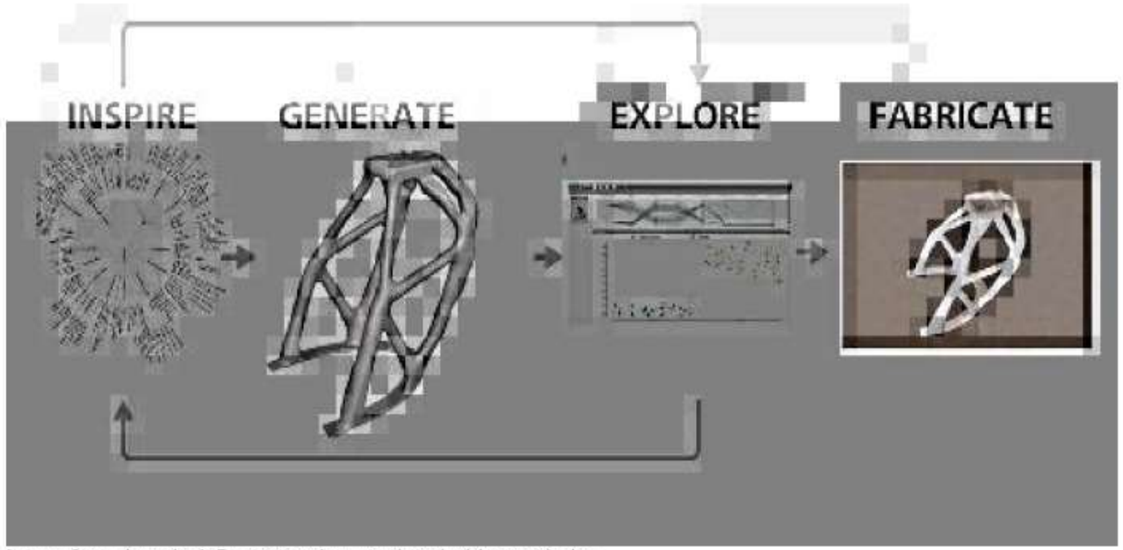
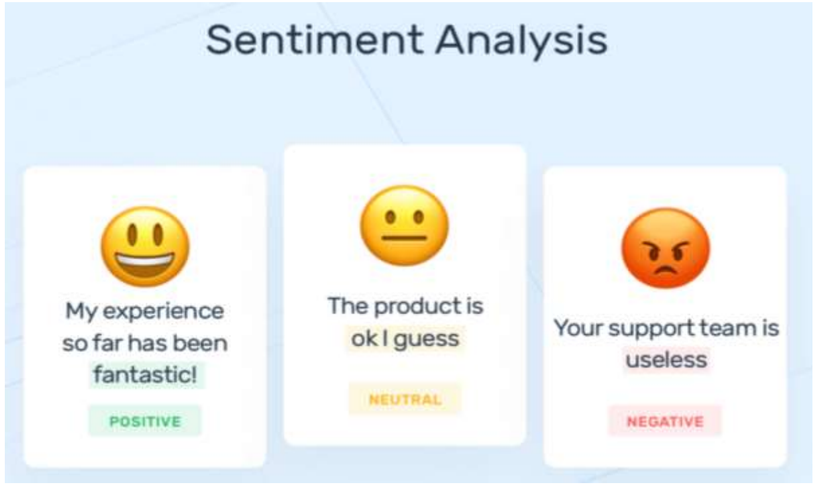


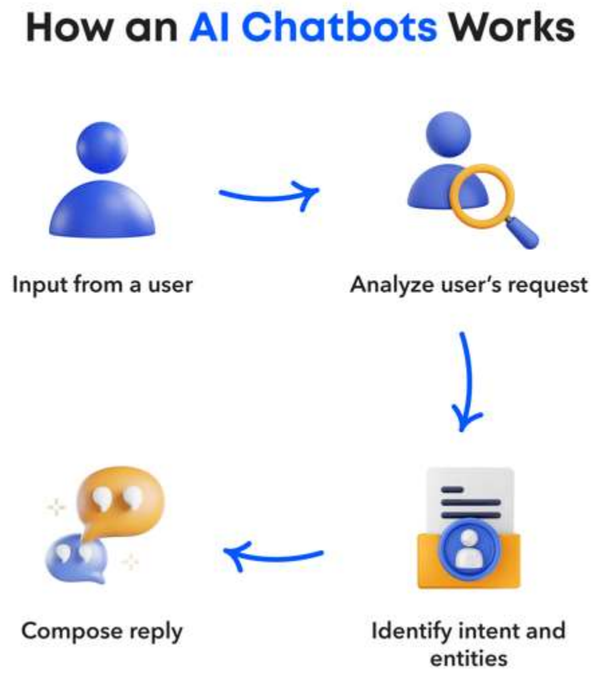
Image from Autodesk Dreamcatcher, reprinted with permission

Image from "Generating Stories from Images" by Samim Winiger, reprinted with permission

The Machine Intelligence Continuum

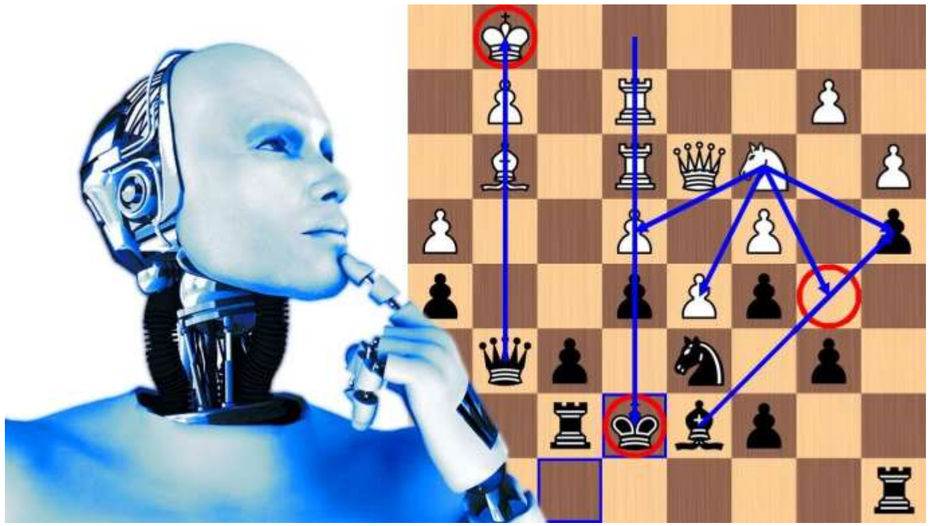
Systems That Relate: This refers to AI systems capable of understanding and interpreting human emotions, context, or complex relationships. Natural Language Processing (NLP) models that understand sentiments or chatbots capable of engaging in context-rich conversations belong here.





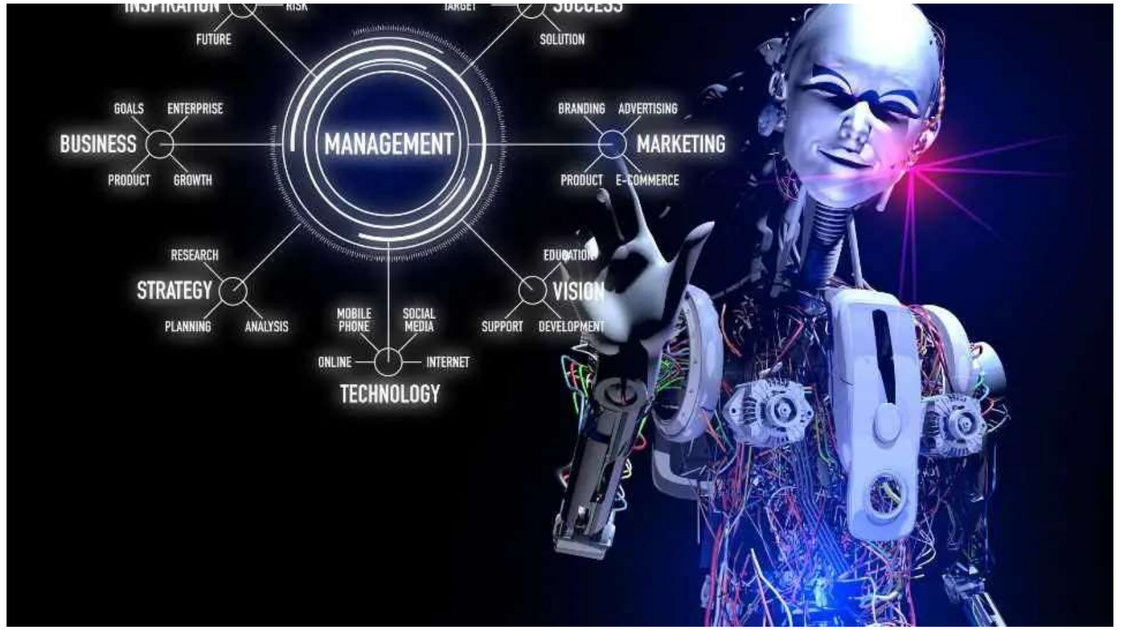
The Machine Intelligence Continuum

Systems That Master: These are AI systems that achieve a level of expertise surpassing human capabilities in specific domains. For example, AlphaZero, an AI system mastering games like chess, or AI-driven medical diagnostic tools that outperform human doctors in certain tasks.



The Machine Intelligence Continuum

Systems That Evolve: The highest level of AI in this continuum involves systems that can self-improve, adapt, and evolve without human intervention. This may include AI systems capable of self-modifying algorithms or evolving their architectures to solve new problems.



Thank you!