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Hybrid Intelligent System

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Abstract: *A Hybrid Intelligent System is a process that combines various types of Artificial Intelligence techniques to generate a more powerful and effectual system. The amalgamation of different learning and prevail over individual restraints and achieve synergetic effects through hybridization of these methods. This system is applicable for a wide range of operations, such as decision-making, forecasting, improvisation and pattern-recognition. This paper provides an overview of Hybrid Intelligent System's architecture, calling attention to its types: Stand- Alone, Transformational, Hierarchical and Integrated. We also analyze different hybridization techniques such as Expert Systems, Neural Networks, Fuzzy systems, Genetic Algorithms and Case-based reasoning. Furthermore, it outlines the core components of Hybrid Intelligent System, emphasizing their ability to amalgamate various AI techniques to solve various complex problems in fields like Healthcare, Financial risk management, Manufacturing, Climate prediction and Agriculture. The emerging applications of Hybrid Intelligent System in these fields highlights the prominence in developing systems that can effectively overcome any dynamic, real-world challenges by improving learning, versatility and decision-making competencies.*

Keywords: Hybrid Intelligent, Fuzzy systems, Neural Network, Genetic Algorithm

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