

Review of Role of AI in Embedded System

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Abstract: *The convergence of Artificial Intelligence (AI) and embedded systems has opened new possibilities for intelligent, real-time, and adaptive computing at the edge. This paper presents a comprehensive survey on the integration of AI in embedded systems, emphasizing architectures, algorithms, frameworks, and applications. We review key developments from academia and industry, discuss major challenges in resource-constrained environments, and highlight trends like TinyML, neuromorphic computing, and federated learning. The aim is to provide a consolidated reference for researchers and engineers working at the intersection of AI and embedded computing.*

Keywords: Artificial Intelligence, Embedded Systems, Edge AI, TinyML, Smart Devices, Real-Time Inference, Federated Learning

