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Enabling Seamless AI-IoT Interoperability with Model Context Protocol (MCP)

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Abstract: *The integration of Artificial Intelligence (AI) and the Internet of Things (IoT) requires seamless communication between AI models and connected devices. The Model Context Protocol (MCP) addresses this need by providing a standardized framework for context-aware model deployment and adaptation across edge and cloud environments. By embedding environmental and device-specific context, MCP enables dynamic, intelligent decision-making in AIoT systems. This paper explores the architecture and use cases of MCP, showcasing its role in enhancing interoperability, flexibility, and efficiency in smart environments.*

Keywords: Model Context Protocol (MCP), AIoT (Artificial Intelligence of Things), EdgeAI, Cloud

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