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## Machine Learning-Driven Optimizations for Energy-Efficient Algorithms in Edge Computing Environments

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Abstract: With the proliferation of Internet of Things devices and the growing demand for edge computing capabilities, there is an urgent need to develop energy-efficient algorithms tailored for edge computing environments. This paper explores the integration of machine learning techniques to optimize algorithms for energy efficiency in edge computing settings. We discuss the challenges associated with traditional algorithms in edge environments and propose a framework leveraging machine learning-driven optimizations. Through case studies and experiments, we demonstrate the effectiveness of this approach in reducing energy consumption while maintaining performance in edge computing applications.

Keywords: Machine Learning, Edge Computing

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