



# Transfer Time Reduction for Offloading in the Mobile Edge Computing using Machine Learning

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## Abstract

Machine learning can be used to support and optimize operations in edge computing. ML approaches can be used to find patterns in workloads and then use those patterns to improve transfer time, execution time, and response time. Mobile edge computing (MEC) has created a suitable environment for time-sensitive applications and mobile devices. MEC provides services with very low latency compared to the cloud environment. However, due to the time-sensitive nature of the work in the MEC environment and the explosive growth of devices in this environment in the last few years, we still face increased response time and user dissatisfaction. To solve this problem, we need to improve the performance of offloading tasks to edge servers, that is, by finding a suitable edge server to offload tasks and reducing the time of transferring tasks to edge servers.

In this paper, we use machine learning in mobile edge computing to optimize the computational offloading operation to reduce the transfer time and response time. Comparing the proposed method with other proposed methods, the proposed method has a significant improvement in terms of transfer time.

**Keywords:** Deep Reinforcement Learning, Off Loading, mobile edge computing, Response time, Internet of Things (IoT)

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