# Optimizing Resource Allocation for Dynamic Workloads in Cloud-Based Scheduling

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**Abstract**: *Cloud computing has revolutionized the way computing resources are provisioned and utilized, enabling efficient and flexible resource allocation for a wide range of applications. However, the dynamic and unpredictable nature of workloads in cloud environments poses significant challenges for resource allocation and scheduling. This paper focuses on the optimization of resource allocation strategies to effectively manage dynamic workloads in cloud-based scheduling. Various approaches, algorithms, and techniques for addressing resource allocation challenges are explored, highlighting their advantages, limitations, and potential applications.*

**Keywords:** Cloud computing.

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