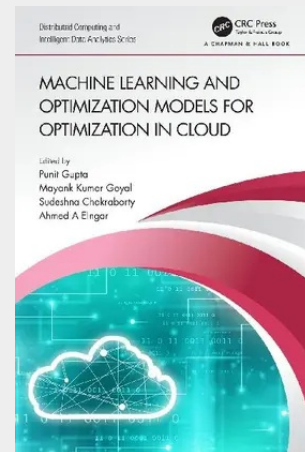


Machine Learning and Optimization Models for Optimization in Cloud

Machine Learning and Models for Optimization in Cloud's main aim is to meet the user requirement with high quality of service, least time for computation and high reliability. With increase in services migrating over cloud providers, the load over the cloud increases resulting in fault and various security failure in the system results in decreasing reliability. To fulfill this requirement cloud system uses intelligent metaheuristic and prediction algorithm to provide resources to the user in an efficient manner to manage the performance of the system and plan for upcoming requests. Intelligent algorithm helps the system to predict and find a suitable resource for a cloud environment in real time with least computational complexity taking into mind the system performance in under loaded and over loaded condition. This book discusses the future improvements and possible intelligent optimization models using artificial intelligence, deep learning techniques and other hybrid models to improve the performance of cloud. Various methods to enhance the directivity of cloud services have been presented which would enable cloud to provide better services, performance and quality of service to user. It talks about the next generation intelligent optimization and fault model to improve security and reliability of cloud. Key Features · Comprehensive introduction to cloud architecture and its service models. · Vulnerability and issues in cloud SAAS, PAAS and IAAS · Fundamental issues related to optimizing the performance in Cloud Computing using meta-heuristic, AI and ML models · Detailed study of optimization techniques, and fault management techniques in multi layered cloud. · Methods to improve reliability and fault in cloud using nature inspired algorithms and artificial neural network. · Advanced study of algorithms using artificial intelligence for optimization in cloud · Method for power efficient virtual machine placement using neural network in cloud · Method for task scheduling using metaheuristic algorithms. · A study of machine learning and deep learning inspired resource allocation algorithm for cloud in fault aware environment. This book aims to create a research interest & motivation for graduates degree or post-graduates. It aims to present a study on optimization algorithms in cloud for researchers to provide them with a glimpse of future of cloud computing in the era of artificial intelligence.



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