

Универзитет Привредна академија у Новом Саду
University Business Academy in Novi Sad

Факултет за примењени менаџмент, економију и финансије Београд
Faculty of Applied Management, Economics and Finance Belgrade

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МЕЂУНАРОДНА НАУЧНО-СТРУЧНА КОНФЕРЕНЦИЈА

**INNOVATION AS AN INITIATOR
OF THE DEVELOPMENT**
ИНОВАЦИЈЕ КАО ПОКРЕТАЧ РАЗВОЈА

BOOK OF ABSTRACTS

ЗБОРНИК АПСТРАКАТА

INNOVATIONS

December 7th
Belgrade, 2023

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Optimizing the performance of deep neural networks by using advanced gradient methods in the context of machine learning

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Abstract: Machine learning is gaining more and more importance, in this context, the research is directed to show advanced gradient algorithms with the aim of maximizing the performance of deep neural networks in the context of the machine learning. Despite the increasing application of deep neural networks to solve various problems, the problem of efficient optimization often arises due to the large dimensionality and nonlinearity of their loss functions. The application of gradient descent, minibatch gradient descent, stochastic gradient descent and similar adaptive approaches contributes to the examination of the effectiveness of the performance of gradient methods. Therefore, the paper aims to show the benefits of applying gradient approaches based on datasets and models for optimizing performance of deep neural networks.

Keywords: Gradient methods, optimization, deep neural networks, machine learning.

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