

## عنوان مقاله:

Deep learning for option pricing under Heston and Bates models

## محل انتشار:

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## خلاصه مقاله:

This paper proposes a new approach to pricing European options using deep learning techniques under the Heston and Bates models of random fluctuations. The deep learning network is trained with eight input hyper-parameters and three hidden layers, and evaluated using mean squared error, correlation coefficient, coefficient of determination, and computation time. The generation of data was accomplished through the use of Monte Carlo simulation, employing variance reduction techniques. The results demonstrate that deep learning is an accurate and efficient tool for option pricing, particularly under challenging pricing models like Heston and Bates, which lack a closed-form solution. These findings highlight the potential of deep learning as a valuable tool for option pricing in financial markets.

## کلمات کلیدی:

Option pricing, Heston Model, Bates model, Deep Learning, Monte Carlo simulation, Variance reduction technique

## لینک ثابت مقاله در پایگاه سیویلیکا:

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