

Title : Improving Function Approximation Accuracy Using Chebyshev Polynomials

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ABSTRACT

In this independent study, we investigated function approximation using interpolation methods by selecting nodes based on the root of Chebyshev polynomials. This technique reduce approximation errors in comparison with the use of equally spaced nodes. In addition, comparative examples between interpolations using equally spaced nodes and Chebyshev nodes are presented. An analysis of numerical errors indicates that interpolation based on Chebyshev nodes yields higher accuracy in function approximation.

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