

Sparse Optimization Methods for Financial Analysis

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Abstract

Mathematical optimization plays a crucial role in data analysis across diverse industries including banking and financial, retail, manufacturing, and healthcare. The exponential growth of big data has brought forth numerous opportunities and has greatly contributed to the advancement and transformation of various fields. Sparse optimization is a vital technique for addressing the curse of dimensionality in big data analysis across multiple disciplines. The theoretical exploration of this subject and the advancement of novel sparse optimization techniques hold immense significance in the progress of applied mathematics and its application domains. This paper delves into the realm of sparse optimization methods for financial analysis. Additionally, we conduct a comprehensive numerical analysis to compare the performance of these optimization methods.

Keywords: sparse optimization, financial analysis

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