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CLASSIFICATION AND CLUSTERING OF FINANCIAL DATA WITH STYLIZED AND CANONICAL FEATURES

This paper (Bastos and Caiado, 2021) introduces a concise set of 10 features that effectively capture key empirical facts in financial markets. Employing both supervised and unsupervised machine learning techniques, the study demonstrates that this feature set outperforms the widely acknowledged 22 canonical features proposed by Lubba et al. (2019) in discriminating between different asset types. The empirical study is conducted using two datasets: one comprising international equity market indices classified as "developed" and "emerging," and another involving large capitalization stock indices and foreign exchange rates. The research aims to assess the discriminatory power of the proposed features in distinguishing between emerging and developed markets, comparing their performance against the canonical features. Additionally, the study extends its analysis to differentiate between stock indices and foreign exchange rates, highlighting the potential applications of the feature set in diverse financial contexts.

SPEAKER

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Jorge Caiado holds a Ph.D. in Applied Mathematics for Economics and Management. He is Senior Associate Professor of Data Science and Time Series Econometrics at ISEG Lisbon School of Economics and Management and a Researcher at the Centre for Applied Mathematics and Economics. He was a visiting researcher in the Department of Statistics at University Carlos III in Madrid (Spain) and Invited Professor at NOVA Information Management School (Portugal). His research in data science has led to numerous publications in scientific journals, book chapters and books. He serves as an econometric and statistical consultant and trainer for numerous companies and organizations. He is co-founder of GlobalSolver – a deep tech company that works with AI, Machine Learning & Big Data.

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