

Tourist Data Analysis using Mathematical Modelling

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Abstract: *Tourism has emerged as a significant contributor to global and regional economies, generating vast amounts of data related to tourist behavior, movement patterns and expenditure. Application of mathematical modelling provides a structured approach to analyzing as data, enabling accurate forecasting, optimization and decision-making. This focuses on use of statistical, econometric and computational models for tourist data analysis. It examines time-series models, regression analysis and modern big data techniques in understanding tourism dynamics. These highlight mathematical modelling improves tourism planning, resource allocation and sustainability. Findings suggest that integrating advanced analytical methods as artificial intelligence and machine learning enhances predictive accuracy and supports sustainable tourism development*

Keywords: Tourism Data, Mathematical Modelling, Forecasting, Big Data & Tourism Analytics