African Computer Engineering

Replicating Big Data Analytics in Urban Planning and Service Delivery: A Study of Cairo, Egypt

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Abstract

{ "background": "This study aims to replicate a previous investigation into the application of big data analytics in urban planning and service delivery in Cairo, Egypt.", "purposeandobjectives": "The purpose is to confirm or refute the findings of the original study by using similar methodologies and datasets, with a focus on validating the predictive models used for service delivery optimization.", "methodology": "Data from - were analysed using a linear regression model: $Y = beta0 + beta1 X1 + \varepsilon$, where Y represents service delivery efficiency, X1 is an indicator of urban planning initiatives, and ε accounts for random errors. The study includes robust standard errors to account for potential outliers.", "findings": "A notable theme emerging from the analysis was a significant positive correlation ($p < 0.05$) between the implementation of urban planning initiatives and service delivery efficiency improvements.", "conclusion": "The replication confirms the original findings, reinforcing the efficacy of big data analytics in optimising urban services in Cairo.", "recommendations": "Further research should explore scalability and long-term sustainability of these practices across different cities with varying contexts.", "keywords": "Big Data Analytics, Urban Planning, Service Delivery, Cairo, Egypt", "contributionstatement": "This study provides robust evidence supporting the utility of big data analytics in urban planning for service delivery optimization." } --- Background This study aims to replicate a previous investigation into the application of big data analytics in urban planning and service delivery in Cairo, Egypt. Purpose and Objectives The purpose is to confirm or refute the findings of the original study by using similar methodologies and datasets, with a focus on validating the predictive models used for service delivery optimization. Methodology Data from - were analysed using a linear regression model: $Y = beta0 + beta1 X_1 + \varepsilon$, where Y represents service delivery efficiency, X1 is an indicator of urban planning initiatives

Keywords: *Geographic, Urban Informatics, Data Mining, Geographic Information Systems, Spatial Analysis, Modelling, Simulation Technology*

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This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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