



Urban Planning E-Government Platform for Traffic Congestion Control in Lagos, Nigeria: User Experience and Impact Studies

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Abstract

Urban traffic congestion in Lagos, Nigeria, is a significant challenge affecting daily commutes and overall city operations. A mixed-method approach combining surveys with real-time data analytics was employed, including a Likert scale survey among 500 residents and traffic flow analysis across key routes in Lagos. Residents reported an average satisfaction score of 7.8 out of 10 on the UEGP usability questionnaire, indicating positive user experience. The E-Government Platform shows promise for improving traffic congestion control in Lagos through enhanced user engagement and data-driven solutions. Future studies should focus on scalability and long-term sustainability of the platform as well as its impact on other urban challenges like pollution and health outcomes. Model estimation used $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i, f\theta(\xi)) + \lambda |Vert\theta|_2^2$, with performance evaluated using out-of-sample error.

Keywords: *Urban Geography, Nigeria, E-Government, Traffic Congestion, Data Analytics, Geographic Information Systems, Mixed Methods*

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