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REVIEWER'S REPORT

Manuscript No.: IJAR-55747

Title: Supervised Models for Estimating Link-Level Traffic Density Using Trajectory Data

Recommendation:
Accept as it is .....
Accept after minor revision.....
Accept after major revision .....
Do not accept (*Reasons below*).....

Rating	Excel.	Good	Fair	Poor
Originality		-		
Techn. Quality		-		
Clarity		-		
Significance		-		

Reviewer Name: Dr Gulnawaz

Detailed Reviewer'sReport

The manuscript provides a methodologically rigorous and contextually relevant investigation of link-level traffic density estimation in Abidjan using supervised learning and trajectory-based data; however, several aspects require refinement prior to publication. The abstract (lines 1–18) clearly articulates the motivation and main findings, but could be strengthened by explicitly stating the dataset size and temporal coverage. The introduction (lines 3–45) effectively frames congestion as a structural challenge in Global South cities, although some claims regarding infrastructure scarcity (lines 15–19) would benefit from tighter citation alignment. The urban mobility context (lines 46–74) is well grounded and justifies Abidjan as a case study, yet it could better distinguish empirical facts from analytical interpretation. The related work section (lines 75–133) is comprehensive, but somewhat descriptive; a more critical synthesis contrasting classical sensor-based and trajectory-driven approaches would improve scholarly depth. The methodology (lines 134–208) is technically sound and well documented, particularly in feature construction and model comparison; however, clearer justification for the selection of specific geometric variables and density estimation procedures is recommended. The experimental results (lines 211–266) convincingly demonstrate the superiority of Random Forest models, though confidence intervals or statistical significance testing would enhance the robustness of performance claims. The discussion (lines 278–330) appropriately situates findings within the existing literature, but should further emphasize potential generalizability beyond Abidjan. Finally, while the conclusion (lines 331–360) coherently summarizes contributions, it would benefit from more explicit policy or operational implications for traffic authorities. Overall, the

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manuscript is strong in technical execution and relevance, but requires moderate revision in analytical framing, statistical reporting, and interpretive balance.