Predicting the Severity of Vehicle Accidents Based on Traffic Accident Attributes Using Machine Learning

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Certification

This is to certify that Segun Abayomi SOFOLUWE with matriculation number LCU/PG/002221 carried out this research work titled "Predicting the Severity of Vehicle Accidents Based on Traffic Accident Attributes Using Machine Learning" in the Department of Computer Science, Faculty of Natural and Applied Sciences, Lead City University, Ibadan, Oyo State, for the award of Master of Science (MSc) in Computer Science and that this has not been previously submitted.

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Dr. A.A Waheed **Date**
Supervisor

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Dr. Wilson Sakpere
Head of Department **Date**

Dedication

This research work is dedicated to God almighty, my Parents, and my Sisters.

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List of Acronyms

WHO-	World Health Organization
ITS-	Intelligent Transportation Systems
AI-	Artificial Intelligence
ML-	Machine Learning
ERP-	Effective Radiated Power

RTA-	Road Traffic Accidents
PICO-	Problem Identification, Interventions, Comparisons, and Outcome
SVR-	Support Vector Regression
SVM-	Support Vector Machine
ELM-	Extreme Learning Machines
SLFM-	Single Hidden Feed-Forward Artificial Neural Network
KNN -	K-Nearest Neighbour
NB-	Naive Bayes
GNB-	Gaussian Naive Bayes
MLP-	Multilayer Perceptron
XGBoost-	Extreme Gradient Boosting
Adaboost-	Adaptive Boosting
LightGBM-	Light Gradient Boosting Machine
CATboost-	Category boosting
EFB-	Exclusive Feature Bundling
GOSS-	Gradient-Based Onside Sampling
SHAP-	SHapley Additive exPlanations