VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM, KARNATAKA- 590014

A PROJECT REPORT ON

DYNAMIC TRAFFIC TOLLING PREDICTION USING SOFT COMPUTING AND OPEN CV

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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CERTIFICATE

This is to certify that the project entitled **"DYNAMIC TRAFFIC TOLLING PREDICTION USING SOFT COMPUTING AND OPEN CV"** has been successfully completed by

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the bonafide students OF **DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING, Alva's Institute of Engineering and Technology**, Moodbidri affiliated to **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the academic year 2023–24. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed in partial fulfillment of awarding Bachelor of Engineering degree.

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ABSTRACT

In response to the rapid urbanization and escalating vehicular traffic, smart city initiatives have become imperative for fostering sustainable urban development. Urban planners grapple with myriad challenges, chief among them being the effective management of traffic congestion. This congestion not only undermines transportation system efficiency but also precipitates environmental degradation and economic losses. Dynamic traffic tolling emerges as a promising solution to alleviate congestion by dynamically adjusting toll prices based on real-time traffic conditions. However, the effective implementation of dynamic tolling hinges on accurate prediction models to anticipate traffic patterns and optimize tolling strategies. This research project proposes a novel method to predict traffic flow in smart cities using computational software. Leveraging computational software techniques such as neural networks, fuzzy logic, and genetic algorithms offers the flexibility needed to model nonlinear relationships in traffic dynamics. The project aims to develop powerful predictive models capable of accurately and efficiently forecasting traffic and congestion levels. By leveraging the power of software calculations, this endeavor seeks to provide urban planners with indispensable toolsto enhance traffic management strategies and promote more sustainable urban environments.