

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER



University of Westminster, Coat of Arms

Booking and Feedback Analysis for Highway Buses

Highway Insight

A dissertation by

Mr. Pasindu Theekshana

Supervised by

Mr. Damantha Silva

Submitted in partial fulfillment of the requirements for the BEng in Software engineering degree
at the University of Westminster.

April– 2025

ABSTRACT

This project, titled Highway Insight: Highway Bus Booking and Feedback Analysis for Sri Lanka targeting to improve the highway bus booking facilities within the country through implementing a centralized online booking system along with the sophisticated sentiment analysis sub-module. Currently, the existing environments have an inconvenient way of booking which results in problems such as overbooking and inadequate feedback collection as well as dissatisfied customers. Through the integration of sentiment analysis, this project aims to give excellent insights into the passengers' responses, toward aiding operators increase services delivery and congeniality. The solution employs machine learning algorithms such as BERT to enable filtering out user feedback as either positive, neutral or negative. The components developed for the purpose of the project include a functional front-end booking interface, an efficient feedback collection system and a sentiment analysis feedback dashboard for the operators. Thus, it is possible to mention that through this approach all the operational gaps of the project are covered, offering a more user-oriented, data-based approach to the booking process that would ultimately create a more positive travel experience of Sri Lanka for visitors.

Keywords: highway bus booking system, ticketing, sentiment analysis, natural language processing, Sri Lanka