

**AN AUTOMATION TOOLKIT FOR RESOURCE-
AWARE PUBLIC TRANSPORT SERVICE
SCHEDULING – A CASE STUDY**

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Degree of Master of Science in Computer Science

Department of Computer Science and Engineering
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DECLARATION

I declare that The dissertation entitled “AN AUTOMATION TOOLKIT FOR RESOURCE-AWARE PUBLIC TRANSPORT SERVICE SCHEDULING – A CASE STUDY” is my own research work and this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

Name of the Student: A G R F Shereen

Signature:

Date: 10th of April 2022

The above candidate has carried out research for the PhD/MPhil/Masters thesis/dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of the supervisor: Dr. Indika Perera

Signature of the Supervisor:

Date:

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ABSTRACT

The Eastern Province Road Passengers Transport Authority (EPRPTA) is one of the most important investment mechanisms for the provincial council launched in 2009. EPRPTA is composed largely of three districts inclusive of Ampara, Batticaloa, and Trincomalee. The transport area in Sri Lanka, especially in Eastern Province has not been the desired qualitative development to provide for the aggressive markets of the contemporary international mainly as demanded with the aid of the commercial and commercial sectors.

Approach to investigate the elements affecting the first-class of provider in public bus transport, and the relationship among the elements affecting, which rely on and independently of the improvement of transport. The study was performed as a qualitative analysis primarily based on the Straussian concept; the facts had been gathered via a chain of interviews and observations.

We discovered significantly affected elements as growing visitors crowding raising expenses of delivery as compared to other inputs one of the different kind routes as the short distance (inside Trincomalee District) and lengthy-distance(out of Eastern Province). Depending on the elements used to measure carrier satisfaction as automobile safety, the physical layout of the station, frequency of departures, online seat booking, and the mode of accessibility can be stated. The provided proof of concept automation toolkit empowers the public transport management officers to effectively plan, organize and carry out their transport-related operations with the help of a managed information system.

In end, we determined that consumer pride closer to public transportation plays a critical position in figuring out the provider's high-quality thereby the expected provider pleasant can be progressed through delivery customers may be reached. In the long run, leading to reducing inefficient non-public automobile usage on public streets.

Keywords: vital factors, grounded principle, qualitative development, criticism

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LIST OF ABBREVIATIONS

Abbreviation	Description
EPRPTA	Eastern Province Road Passengers Transport Authority
SLTB	Sri Lanka Transport Board
NTC	National Transport Commission

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