



AIUB DSpace Publication Details

Title: Design and development of lane management and automatic toll collection system

Author(s) Name: Tanim Ahmed, Md Mahedi Hassan, Rabeka Sultana, Abu Numan Afif, Md Saniat Rahman Zishan

Contact Email(s): saniat@aiub.edu

Published Journal Name: 2021 2nd International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST)

Type of Publication: Conference

Volume: _____ **Issue:** _____

Publisher: IEEE

Publication Date: 2021/1/5

ISSN: 978-1-6654-1576-7

DOI: 10.1109/ICREST51555.2021.9331186

URL: <https://ieeexplore.ieee.org/abstract/document/9331186>

Other Related Info.: 629-634



AIUB DSpace Publication Details

Abstract:

With the speedy development of the economy and the advancement of urbanization, the number of communication mediums and transportation is increasing instantaneously that's why Bangladesh needs a smart solution in every sector. In this paper, RFID and Image processing based automated toll collection system is introduced to monitor the toll plaza. A road zipper device is introduced for a proper lane management system that helps to reduce the traffic jam. Two step-based toll collection system ensured the specification of the vehicle then deduct the toll amount from their account without stopping the vehicles. For this proposed model, vehicles need to insert a digital number plate and the number plate information is embedded on the RFID tags. This paper presents a prototype of a road zipper and automatic toll collection device that gives proper results as expected. This system is automated, so it reduced human error. Thus, making an intelligent transportation system will become easier.