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TRAFFIC LIGHT CONTROLLER FOR SMART CITIES USING FUZZY LOGIC

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Abstract: Today, smart cities are very much affected due to traffic jam and traffic signals. Traffic light controller is the best solution for solving the traffic jam problems. The existing signal controllers are not sufficient to give the appropriate solutions to these types of traffic problems. Only a very efficient and up to date smart fuzzy light controller (FLC) can cater to this gigantic problem of massive, unruly, uncontrolled traffic.In the proposed paper, we have introduced an FLC which incorporates all the modern manifestations of fuzzy logic, capable of providing a solution to the mind-boggling problem of traffic jams. This controller, consists of four inputs, and two outputs, encompassing several linguistic variables, thus, capable of catering to worst imagined traffic problems.

Keywords and Phrases: Linguistic Variables (LV), Membership Functions (MF), Traffic Light Controller (TLC), Fuzzy Light Controller (FLC).

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1. Introduction

Traffic snarls and traffic congestion is a gift of modern rapid development, a necessary evil that cannot be avoided. The entire scientific community is racking its head to find a convenient solution to this problem, choking the entire movement in the cities. The challenges and problems created by traffic jams in mega-cities or in densely populated areas, due to a high number of vehicles on the road are