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PROGRAMME ABSTRACT

"Bridging Gaps with Creativity for Future Sustainability"

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TRAFFIC LIGHT CONTROL USING FUZZY LOGIC

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Abstract

The number of cars at a traffic light keep increasing especially during peak hours and this situation can cause traffic congestion. In order to overcome this problem, Fuzzy Logic Controller System is used in this study to reduce total waiting time of vehicles at the traffic light by extending the green light phase. By this, traffic congestion can be reduced. In the study, we consider the number of cars at queue side and arrival side as our input and the extension time of green light as output. The extension time of green light is obtained by using MATLAB (Fuzzy Logic Mamdani Toolbox). Simulation results shown the time (in seconds) of green light that should be extend from the original time, vary according to the number of cars available at the traffic light. Methods of Centroid, Bisection and Smallest of Maximum discussed to compare the extension time of green light phase. The graphs in MATLAB Toolbox, shown that the extension times using Centroid and Bisector method has a better performance compared to Smallest of Maximum (SOM) method. However, Centroid method was chosen since it is the famous method and quite natural from the point of view of common sense.

PORTABLE LAUNDRY BAG (POLAR)

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UiTM KAMPUS BANDARAYA MELAKA

Abstract

The invention our team has come up with is called Portable Laundry Bag or friendlier named as, POLAR Bag. The aim we are trying to achieve with this invention is to modernize and improve proficiency of travelling. The functions of this bag are washing and drying clothes. It provides the means to have clean clothes to wear without bringing excessive garments. This invention is suitable for camping, as well as for any casual vacation. We have studied the elements necessary to make this invention work such as the material of the bag, required compartments, the washing, and drying equipment. We have also designed the bag in a way that it is handy and reasonable to use. The size of the bag is not any bigger than a school bag to ensure that it brings no trouble to manage to its users. Sturdy straps are attached to the bag for effortless transport. The POLAR Bag is meant to wash and dry mandatory clothes only as its objective is to provide an alternative to instant clean attire. Therefore, it does not support the amount of clothes as much as a normal washing machine does. However, it definitely helps in traveling as users can travel for many days without worrying about what to wear. Users can just easily dump their dirty clothes inside the bag and obtain it clean within an hour or less. With the POLAR Bag, we believe many people will see its advantages and reasonable functions as well as being able to discard one thing to worry when they travel. We seek to make lives easier, and we believe POLAR Bag fulfill our purpose.