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DESIGN AND DEVELOPMENT OF AN ARDUINO-BASED SMART TRAFFIC LIGHT

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ABSTRACT

Traffic congestion is a common problem in urban areas, often caused by the increasing number of vehicles and the limitations of conventional traffic light systems.

Traditional traffic lights usually operate using fixed timing mechanisms that are not flexible and may result in unnecessary delays and inefficient traffic flow.

This study presents the design and development of an Arduino-based smart traffic light system that uses a programmed timing sequence to control traffic signal operations.