

Analysis and design of a real-time traffic light control system at an intersection.

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Abstract: This topic focuses on analyzing and designing a real-time system for controlling traffic lights at an intersection. The reason for choosing this topic stems from the need to improve traffic flow efficiency at intersection areas. The objective of the research is to build an effective solution to reduce traffic congestion and increase traffic safety by optimizing signal light timing. The method combines theory with experimentation to ensure the feasibility of the system. The expected results will make an important contribution to improving urban traffic infrastructure.

Keywords: Traffic light control system, real-time, intersection, traffic flow optimization, traffic safety