

4-WAY TRAFFIC CONTROL SYSTEM USING ARDUINO WITH AUTOMATIC BARRIER GATE

S. PRABHA^{1a}, M.NIVETHITHA^{2b}, E. ASMITHA^{2c}, N. KAVIYA^{2d}

¹Assistant professor, Department of Information Technology, Panimalar Engineering College, Chennai, India

² III yr. students, Department of Information Technology, Panimalar Engineering College, Chennai, India

Rapid urbanization is a problem for entities responsible for city infrastructure and comfort and safety. Because the number of cars and two-wheelers on the road is increasing and traffic is becoming more congested, traffic accidents are becoming more common. Meanwhile, traditional traffic control systems have insufficient coverage to control all city traffic and cannot scale properly. Realizing the importance of transportation in IOT is a recent development that is moving society toward automated processes and intelligent management systems. The IoT-based traffic control system with an automatic barrier gate using Arduino is a cutting-edge solution that leverages the power of Internet of Things (IoT) technology to revolutionize urban traffic management. In order to create a safe environment for people, we plan to create an IOT that can sense and function on its own (like in factories and trains) on roads. This IOT will call a barricade when a traffic light is red and release it when it turns green. Furthermore, by utilizing sophisticated vehicle identification techniques, the system may give priority to emergency vehicles, ensuring speedy and secure access to emergency services. This system leverages the power of IoT technology to enable seamless communication and data exchange between traffic infrastructure components, making it a highly adaptive and intelligent solution for urban traffic management.