ABSTRACT

In modern urban environments, efficient and reliable street lighting is crucial for public safety, energy conservation, and overall city functionality. The number of non-functional streetlights in different location provide data to be used for maintenance and improvement of street lighting infrastructure. This feedback system can also alert local authorities about issues and visualize the locations through mapping technology in website. The sensors installed on streetlights, connected to a central controller, to collect real-time data used to identify areas where the streetlights are not functioning. The system make use of artificial intelligence (AI) algorithms to analyze power consumption trends, forecast times of peak demand, and pinpoint locations with an excessive or inadequate load. The technology optimizes the distribution of power through intelligent load balancing, lowering the possibility of grid overloads and raising overall energy efficiency by using voltage sensor. This Non-functional Streetlights are designed to address the challenges of identifying and precisely locating malfunctioning streetlights in diverse environments. Data from the feedback system can alert authorities about non-functional street lights for rapid repair.it also monitors energy usage to optimize efficiency. Integration with WhatsApp and website enables residents to report issues, improving accuracy. This comprehensive approach enhances visibility for better maintenance.