Solar Powered Street Light with Sensor and Auto Intensity Control

Asan Nainar[1], Hariprasath[2], Layanya[3], Kathiravan[4], Sowmya[5]
Faculty, Department of Information Technology[1]
Students, Department of Information Technology[2,3,4,5]
SRM Valliammai Engineering College, Kanchipuram, Tamil Nadu, India

Abstract*: The goal of this work is to predict solar panel power output by utilizing machine learning techniques, such as neural networks and regression, and by examining variables such as panel orientation, temperature, and sun irradiation. Models with high forecast accuracy help with grid integration and solar energy management. The article also outlines an innovative LED street light system that runs on solar power and uses Internet of Things (IoT) technology for intelligent control. By adjusting brightness in response to motion detection and current conditions, the device improves both urban safety and energy economy. For continuous operation, it runs on a backup battery, encouraging intelligent and sustainable street lighting*

Keywords: Prediction, Internet of Things (IoT),Sensors, Backup Battery, Energy Economy

REFERENCES

[1]. Abubakar Mukhtar, Student, Mr. Rakesh Kumar, Assistant Supervisor," Advance Solar Power LED Street Lighting with Auto Intensity Control", international Journal of Scientific and Engineering Research, volume 7, issue 5, May 2020.

[2]. T. Rajasekhar, Dr.K.Prahalada Rao," Solar Powered LED Street Light With Auto Intensity Control", Engineering, Environmental Science, Published 2017.

[3]. Mr. N. Pavan Kumar, M.E Asst. Professor, HOD, Dept. of EEE SSE College, Puttaparthi, AP, India," Auto Intensity Control of a Street Light by using PV Cell", International Journal of Engineering Applied Sciences and Technology, 2020, Vol. 4, Issue 12, ISSN No. 2455-2143, Published Online April 2020 in IJEAST.

[4]. Auto Intensity Control of a Street Light by using PV Cell," Automatic Street Light using Solar and Piezoelectric Sensor", International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; Volume 8 Issue V, May 2020.

[5]. Dhairysheel Shivaji Ambhore, Akash Tiwari, Anisha Raja Vijan, Jishnu Patil," Performance Enhancement of Solar Powered LED Street Light System", International Journal of Computational Engineering Research (IJCER), Volume 10 Issue 9, September – 2020.

[6]. Mrs. Shradha Bora, Krrish Kumbhare, Aayusha Kshirsaga, Laxmi Kove, Kritika Raina," Solar Street Light Model using IoT",International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 11, Issue XI, Nov 2023.

Copyright to IJARSCT
www.ijarsct.co.in

DOI: 10.48175/IJARSCT-17619

ISSN
2581-9429
IJARSCT

115