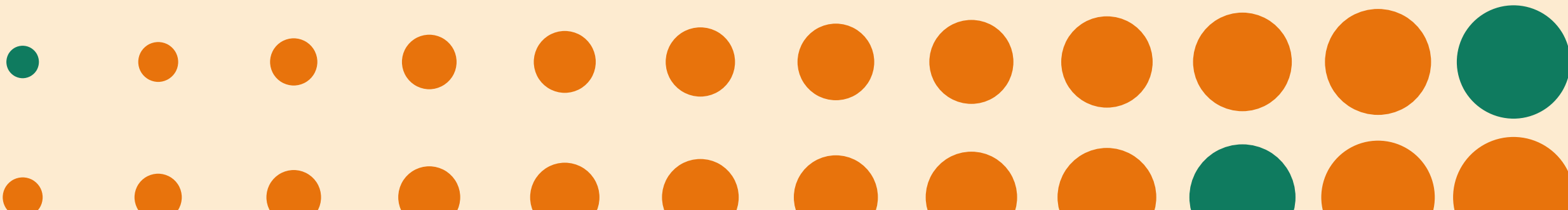


FINAL YEAR PROJECT • B.TECH ELECTRICAL ENGINEERING

Solar Power Monitoring Dashboard

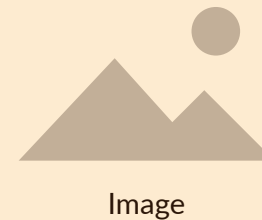
Live generation tracking for rooftop solar

Aarav Sharma • Diya Patel • Prof. R. K. Mehta • Electrical Engineering, 2025–26



Agenda

- 01 Introduction
- 02 Literature & Gap
- 03 Proposed System
- 04 Implementation
- 05 Results
- 06 Conclusion



Image

KEY IDEA

Solar plant monitoring is still handled manually in most places – slow, error-prone and hard to track.

Why this project matters

Introduction

- Solar plant monitoring matters to homeowners and installers every day
- Current methods are manual, slow and hard to scale
- Affordable technology now makes automation practical
- This project builds solar power monitoring dashboard as a working prototype

CONTEXT

Most homeowners and installers we surveyed still rely on paper or spreadsheets for solar plant monitoring.

Problem statement

01

Manual work

Solar plant monitoring takes hours of repetitive effort.

02

Errors

Mistakes creep in and are hard to trace.

03

No insight

Homeowners and installers lack data to make decisions.

Literature survey

Study	Approach	Limitation
Study A	Rule-based automation	Not adaptive
Study B	Mobile data collection	No analytics
Commercial tools	Full-featured suites	Costly and complex

Representative summaries — replace with your own citations.

System architecture



Input

Data captured from users or sensors



Process

Core logic validates and analyses



Store

Secure database and backups



Output

Dashboard, alerts and reports

Block diagram



Block diagram / flowchart

Every module talks through one simple, testable interface.

The system is built in layers: an input layer, a processing service, a database and a dashboard. Each layer can be tested independently, which keeps solar power monitoring dashboard simple to maintain and extend.

Project timeline



Implementation snapshots



Image 1

Main dashboard

Overview of live data



Image 2

Data entry

Simple forms with validation

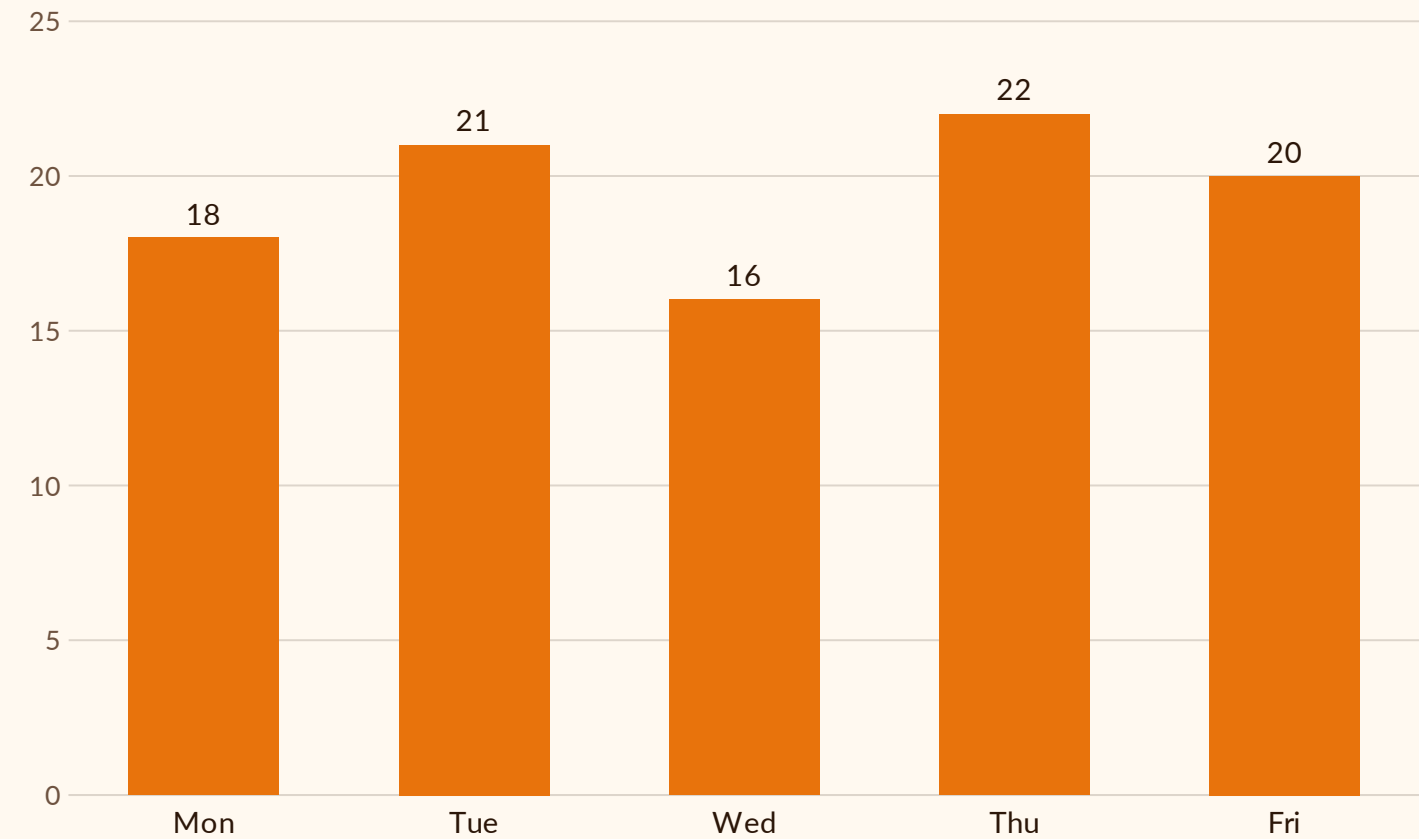


Image 3

Reports

Exportable summaries

Results



Sample data for illustration — replace with your own figures.

12%

more yield after fault alerts

The prototype improved steadily over the evaluation period (sample data).

Key outcomes

12%

more yield after fault alerts

100%

records digitised

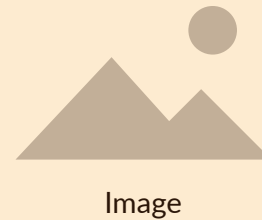
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average response

Figures from our test setup (sample data).

Conclusion

- Solar Power Monitoring Dashboard meets its main objectives
- Automation saves time and reduces errors for homeowners and installers
- The design is simple to extend and maintain



Future scope

01

Mobile app

Native apps for Android and iOS

02

AI insights

Predictions from historical data

03

Scale-up

Deploy across more sites

Thank you

Questions and suggestions are welcome.

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