Revitalizing Solar Insights: A Dashboard for West Tennessee Solar Farm

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UT Martin

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Introduction

Motivation

Can we build an interactive dashboard to improve research and education accessibility, optimize power production, and advance sustainable energy practices?

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   - Dashboard Hosting
   - Export Data

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   Develops an interactive dashboard for data visualization.
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   Hosts a web server to allow users from all major operating systems to be able to access the dashboard.
5. **Google Cloud Console**
   Safeguards API information for enhanced data security.

Project Goals

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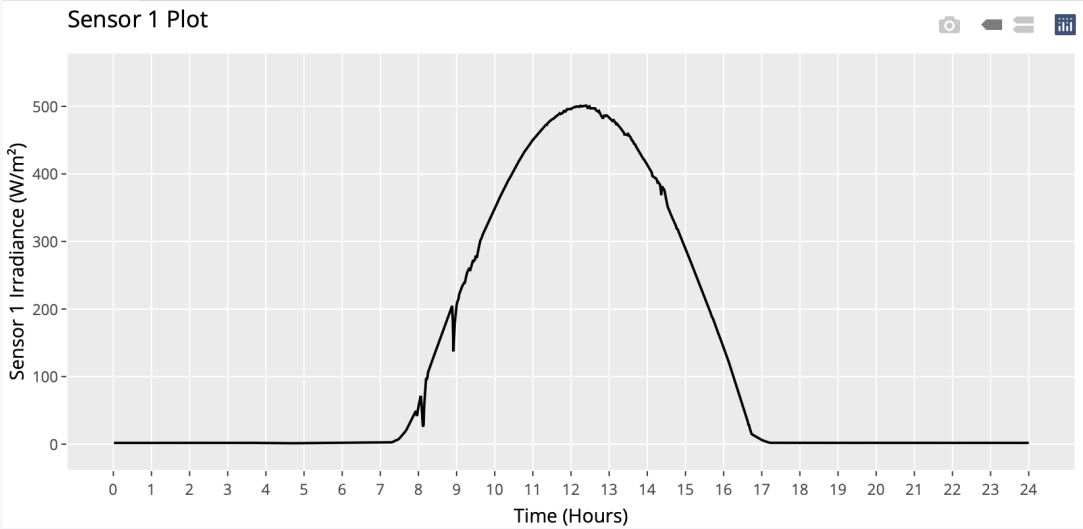
3. **R-Shiny Dashboard**
   encompasses all of the aforementioned functionalities.
4. **Cross-Platform Accessibility**
   Ensure inclusivity by designing a webpage that accommodates diverse laptop operating systems, guaranteeing a seamless user experience.

Dashboard Demo

West Tennessee Solar Farm

Live Data | Daily Data



Tomorrow's Forecast

Date	Metric	Value
2023-09-24	Predicted Average Cloud Cover (%)	82.62
2023-09-24	Predicted Average Temperature °F	72.96
2023-09-24	Weather Outlook	Overcast
2023-09-24	Predicted UV Radiation	7.21

This project is supported by the University of Tennessee Research Foundation, the Department of Computer Science, and the Department of Mathematics and Statistics at the University of Tennessee at Martin.

Future Work

1. **Predictive Analysis**

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2. **Notifications**

Future Work

1. **Predictive Analysis**
2. **Notifications**
3. **Video Tutorial**

Conclusion

The dashboard creates:

1. An educational tool for people to learn about the Solar Farm Process
2. A research tool that provides public data to study

Any Questions?

Comments?

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