

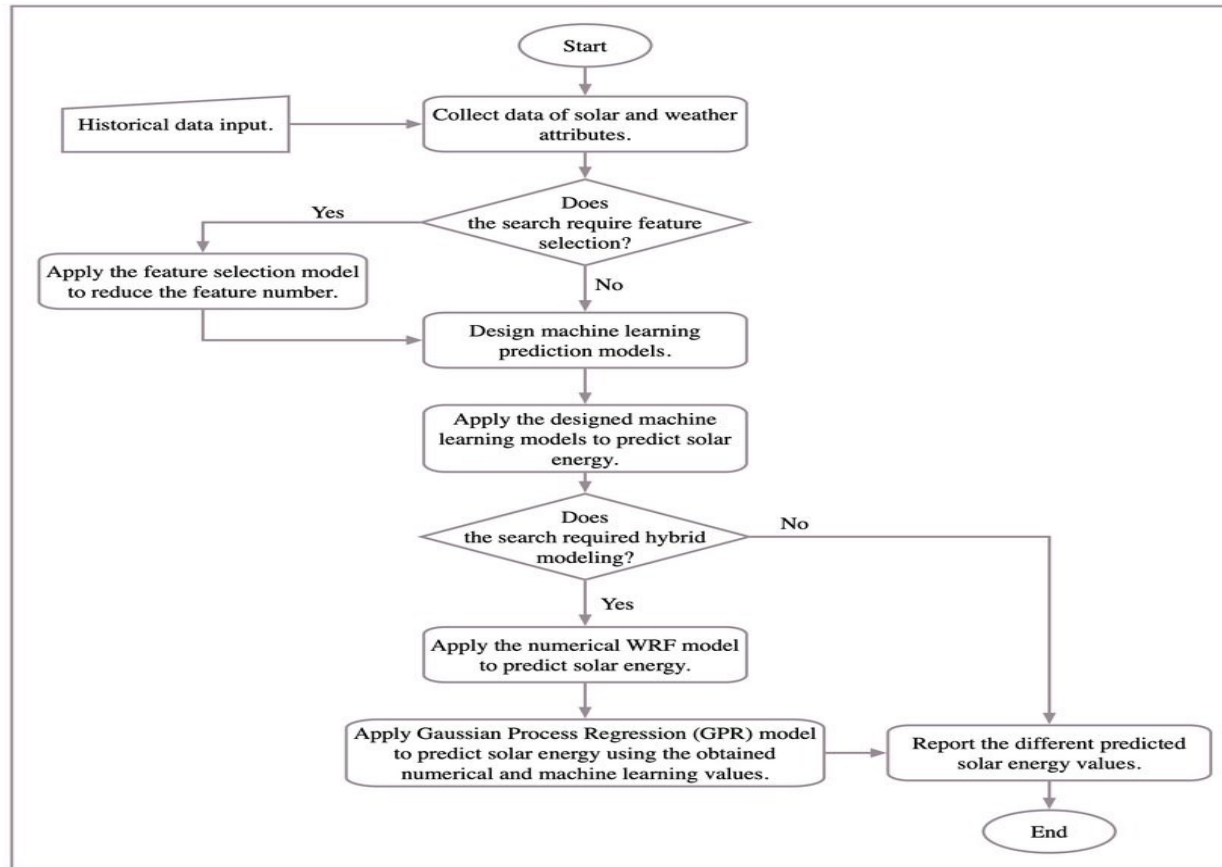
ProjectDesignPhase-II
DataFlowDiagram&UserStories

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Project Name	Solar Panel Forecasting

DataFlowDiagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Example:



UserStories :

As a solar power plant operator, I want to receive accurate and reliable solar panel forecasts to optimize my energy generation and improve grid integration. This will help me make informed decisions about maintenance schedules, energy trading strategies, and resource allocation.

As an energy trader, I need accurate solar panel forecasts to effectively plan my buying and selling activities in the energy market. Reliable forecasts will enable me to optimize my trading strategies, maximize profits, and reduce reliance on conventional power sources during peak solar generation hours.

As a grid operator, I require precise solar panel forecasts to ensure grid stability and efficiently manage the integration of solar energy into the electrical system. Accurate forecasts will help me balance supply and demand, avoid imbalances, and optimize grid operations to minimize disruptions and maximize the utilization of renewable energy.

As a homeowner with solar panels, I want access to real-time and accurate forecasts to better manage my energy consumption. This will allow me to plan energy-intensive activities during peak solar generation hours, reducing my reliance on the grid and maximizing the use of self-generated solar energy.

As a renewable energy investor, I rely on reliable solar panel forecasts to assess the long-term financial viability of solar energy projects. Accurate forecasts will help me evaluate the potential returns on investment, plan for future maintenance and replacements, and make informed decisions about portfolio diversification.

As a research institution or academic, I require access to historical and real-time solar panel forecasts to study and analyze the performance of solar energy systems. Reliable forecasting data will enable me to contribute to the advancement of forecasting techniques and improve the overall understanding of solar energy generation patterns.

As a sustainability advocate, I want access to solar panel forecasts to raise awareness about the benefits of

solar energy and encourage its adoption. Accurate forecasts will help me educate communities, policymakers, and businesses about the potential of solar power in reducing carbon emissions and transitioning to a sustainable energy future.