

# EcoForecast AI

## 12-Month Building Electricity AI Forecast with Energy Reduction Recommendations

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### Project Description

An intelligent energy AI forecasting platform that predicts a building's 12-month electricity consumption based on building characteristics and environmental factors. Users input basic building information (type, size, HVAC system, location, etc.) and receive personalized predictions along with actionable recommendations to reduce energy usage. The system leverages multivariate time series analysis, incorporating historical consumption data from comparable buildings, calendar patterns, and weather conditions to generate accurate forecasts.

### High-Level Requirements

Requirement	Description
<b>Input Form</b>	Simple form interface for building characteristics (type, size, HVAC, location)
<b>12-Month Forecast</b>	Generate electricity usage predictions using multivariate time series AI model
<b>Visual Curve</b>	Display predicted monthly electricity consumption as an interactive graph
<b>Energy Recommendations</b>	Provide tailored suggestions to reduce electricity usage
<b>Machine Learning Predictions</b>	Leveraging deep learning for accurate predictions based on historical data