

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