



Advanced Energy Optimization Solution (EOS) with Artificial Intelligence Algorithms for Energy Saving in HVAC System

Winning the **HANSON SUPREME GRAND AWARD** of Environmental Bureau & EMSD Energy Saving Championship Scheme 2018



A.I. Data Driven Approach for Energy Optimization

- Artificial Neural Network (ANN) to model and predict the HVAC system and Particle Swarm Optimization (PSO) technique to optimize the energy consumption
- Virtually no rules nor formulas, only data
- Practical solution to optimize the energy usage

Advantages

- AI Algorithms to improve system energy efficiency and interaction with predictive model by adapting to user behavior
- Learning capacity
 - ✓ To reflect the latest conditions of the equipment
 - ✓ Better performance over time because the ANN uses the latest equipment data for modeling

Saving 30% of HVAC System Energy Consumption

