Weighted Power Mean HM (Harmonic Mean) : it seems like been missing in analysis

The Weighted Power Mean HM (Harmonic Mean) model has the following analysis:

- RMSE: 0.0411, which is slightly better (lower) than other models.
- Average Absolute Error: 0.0279, comparable with other best-performing models.
- Pearson Correlation: 0.2254, higher than previous models, indicating slightly better linear relationship with actual data.
- Spearman Correlation: 0.3087, also highest among all models, showing better rank correlation.

Weights:

- Variable 1 (Living room temperature) retains highest importance with weight ~0.934
- Variable 3 (Office room temperature) has secondary importance with weight ~0.066
- Other variables have zero weights.

Interpretation:

- The Weighted Power Mean HM provides the best metrics overall, showing a good fit without overfitting.
- Like other models, it prioritizes temperature variables (X1 and X3).
- It does not assign weight to humidity or pressure variables, indicating lesser predictive contribution.
- Compared to geometric or arithmetic means, it better captures variable 1's strong influence and improves correlation statistics.

In conclusion, the Weighted Power Mean HM model is the best performer based on RMSE and correlation metrics and is recommended as the optimum model for Appliances energy consumption prediction, with a clear focus on key temperature predictors [attached file: powermean-statsHM.txt].