

EVALUATION OF THE IMPACT OF INPUT DATA VARIATIONS ON ELECTRICAL LOAD DISAGGREGATION

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MOTIVATION

- Input data collections (e.g. public data sets) differ
 - -Structural differences
 - Household intrinsic
 differences
- Complicates comparison of

Initial Results

- Temporal resolution evaluation
 - Lower impact than further difference
 - Preserves impact of further characteristics
 - Confirmation on simplified data

F1 score for decreasing temporal resolution On three dish washers



published results

- Results have been shown to be influenced by input data differences
- Complicates further evaluations
 - Can any household work with the same algorithm?
 - –Which algorithms are suited for which circumstances?
 - Under which circumstances are algorithms tested?

requires HOW DO INPUT DATA CHARACTERISTICS CONCERNING TEMPORAL RESOLUTION, DEVICES AND THEIR USAGE IMPACT

METHODOLOGY

Identification of Data

Characteristic Differences

- Variation possibility assessment for characteristics
- Evaluation of the impact on load disaggregation results
 Verification on realistic public data sets

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NILM RESULTS?

CHALLENGES

- Currently highly-distributed knowledge
- Number of differences difficult to assess
- Interdependencies between characteristics
 - During variation
 - During evaluation

o [Total power [W]

Envisioned Contributions

- Knowledge about data characteristics
 - Value ranges
 - Metrics

Gefördert durch

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- Knowledge about interdependencies
 - For adaptation
 - For evaluation
- Impact knowledge concerning disaggregation results

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