Towards a unified standards for smart infrastructure datasets
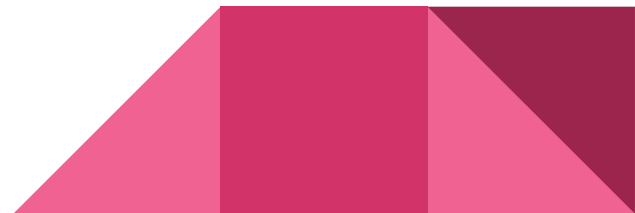
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Why it's important?

Commercial and residential buildings in US represent 40% of total energy consumption

Residential buildings account for 28% in UK

Residential buildings account for 26% in Germany

Problem

Different datasets

No clear metric for environment impact

Comparison between different contribution may be not easy

Pecan street Inc. dataset

Minute-by-minute household data

Different rooms (e.g. living, bedroom, etc.)

Different appliances included

Data about household itself (e.g. Area, construction year, number of windows, etc.)

Social game dataset

Similar to Pecan dataset in basic

More specific on one type of residential

More inclusive of weather parameters

Introduced gamification process

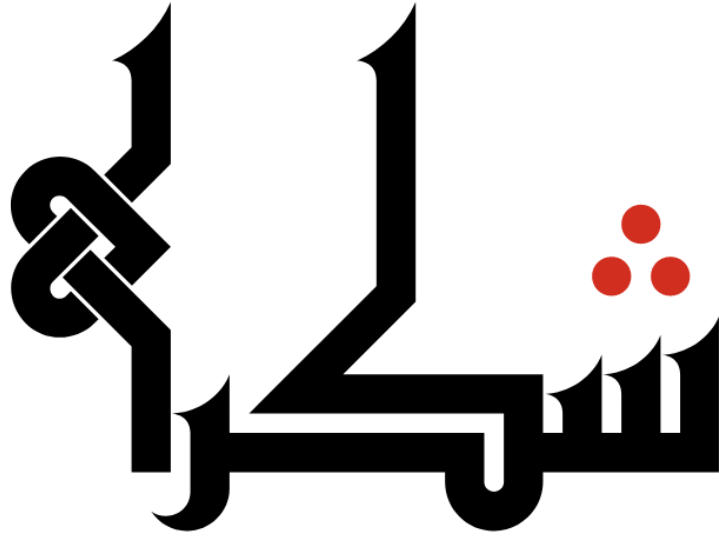Reward who respond and reduce their consumption

What's proposed?

Not all energy sources are created equal

Considering other environmental impact (e.g. CFC emissions from refrigerator, ACs, etc.)

Augmenting data gathered from smartphones (for more personalized analysis)

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Thank you!