Challenges of Software Energy Efficiency

- Hardware/software interactions are chaotic.
- Measuring the energy impact of software is complex.
- Evidence so far is anecdotal and not generalizable.
- There is no unified research approach.

1. Gather data from all abstraction and physical layers
2. Guide the analysis through stakeholders’ domain knowledge
3. Apply data mining techniques to identify candidate hotspots
4. Recognize and evaluate hotspots with an iterative two-stage approach
5. Build an experience base for energy-efficient software
6. Validate the impact of the hotspots in a controlled environment

GreenSweep: Guided Recognition and Evaluation of SoftWare Energy hotsPots

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