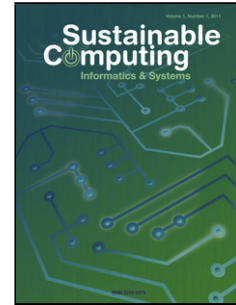


## Accepted Manuscript



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## HIGHLIGHTS

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7 We highlight the following novel contributions:

- 8 • We present an approach of workload characterization of a cluster.
- 9 • We apply neural network models and unsupervised classification models with basic  
10 OS-reported resource features for power estimation;
- 11 • We build and test the power estimation models in a cluster environment from a large  
12 size of measurement data;
- 13 • We evaluate the power estimation models in terms of not only accuracy but also  
14 portability and usability.
- 15 • We study the impact of selecting different performance features on the accuracy of  
16 models.  
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