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Deep Learning for Automatic Stereotypical Motor Movement  
Detection using Wearable Sensors in Autism Spectrum Disorders

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**Highlights**

- A new application of deep learning in automatic SMM detection on wearable sensors
- Feature learning via CNN outperforms handcrafted features in SMM classification
- Parameter pre-initialization is useful to transfer knowledge in longitudinal data
- Including temporal dynamics of the signal using LSTM improves the detection rate
- Using an ensemble of LSTM learners provides more accurate and stable SMM detector

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