

High-Dimensional Sequences Challenge



Challenges



Curse of dimensionality in sequence modeling



Exponential growth in parameter space



Need for **automatic feature extraction**



Raw data (pixels, waveforms) vs **handcrafted features**

✓ Deep Learning Solution



Hierarchical representation learning



End-to-end training from raw sequences



Automatic feature learning at multiple levels



Direct processing of **raw data**



Deep Learning Enables

Automatic feature extraction and hierarchical representation learning
from high-dimensional raw sequences