Comparing different state-of-the-art solutions for image prediction using time-series analysis

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- Useful for future image prediction & image reconstruction

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- Using the standard LSTM from Hochreiter & Schmidhuber [**?**]
- Autoencoder architecture
- Useful for future image prediction & image reconstruction
- Typical baseline for newer, more advanced algorithms

LSTM Autoencoder

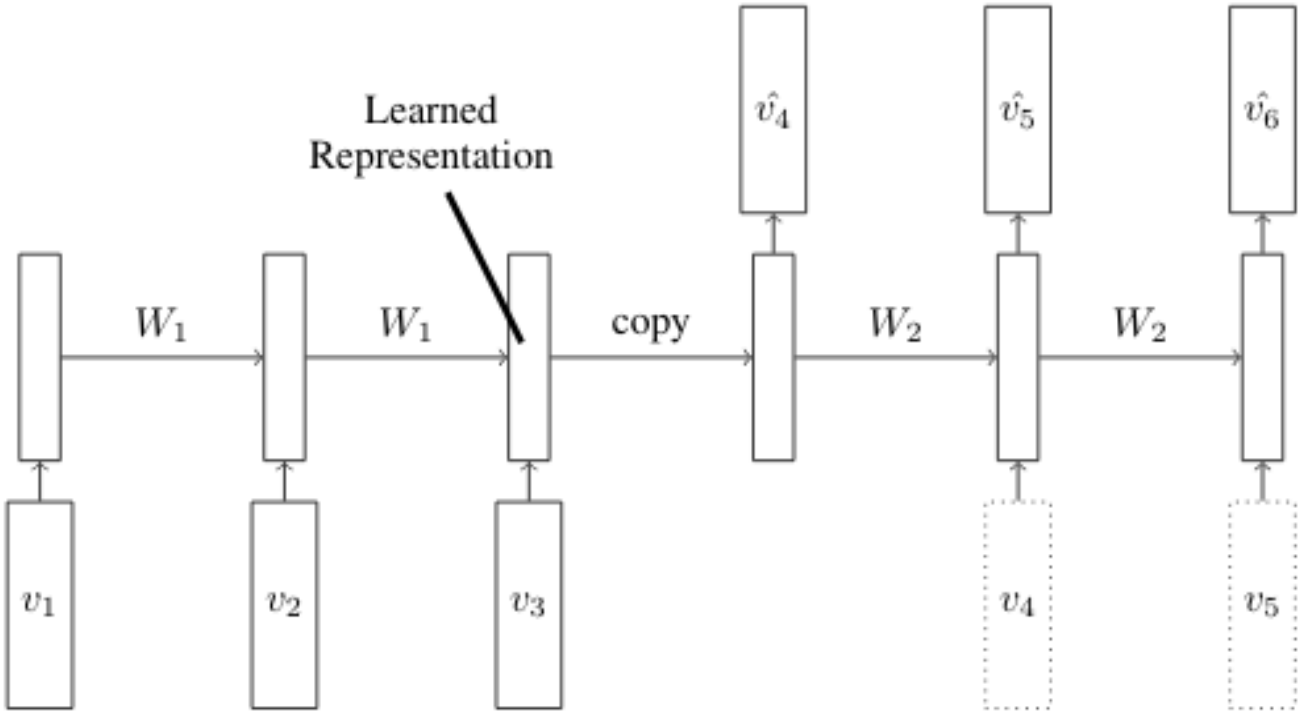

Figure: Future image prediction model [**?**]

LSTM Autoencoder

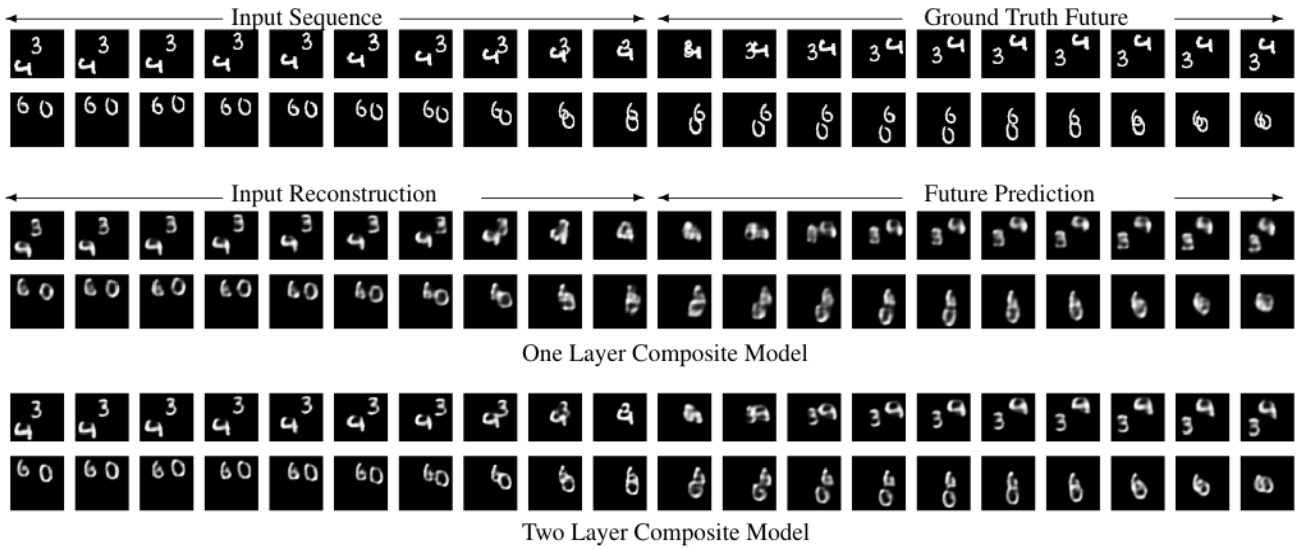

Figure: Results of MovingMNIST experiment [**?**]

ConvLSTM Autoencoder

- „Convolutional LSTM Network: A Machine Learning Approach for Precipitation Nowcasting“by Shi et. al. [**?**]

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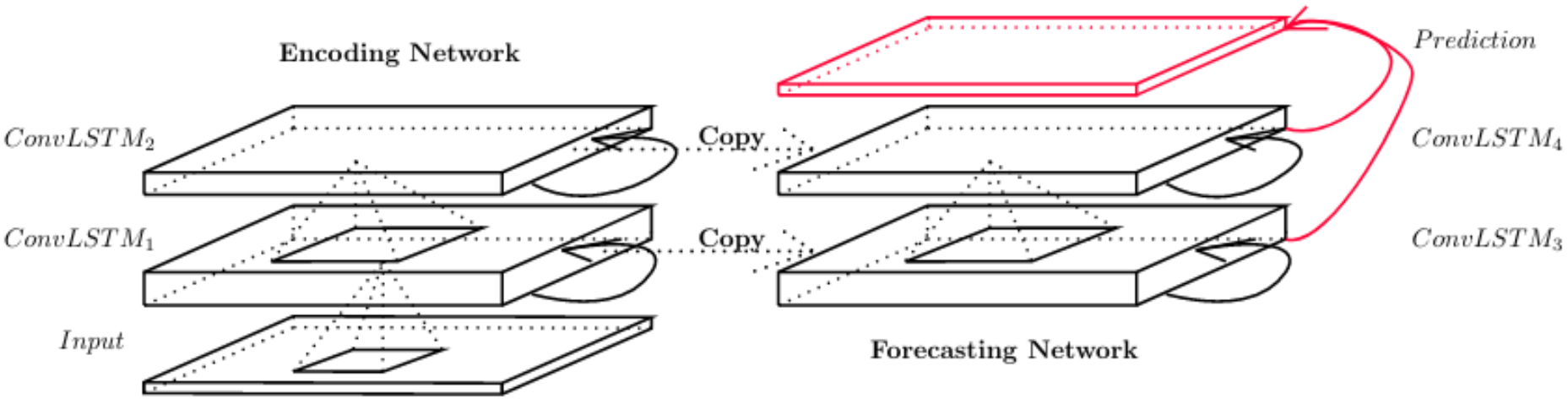
- Similar to LSTM Autoencoder, but uses ConvLSTM instead
- Outperforms the LSTM Autoencoder

ConvLSTM Autoencoder



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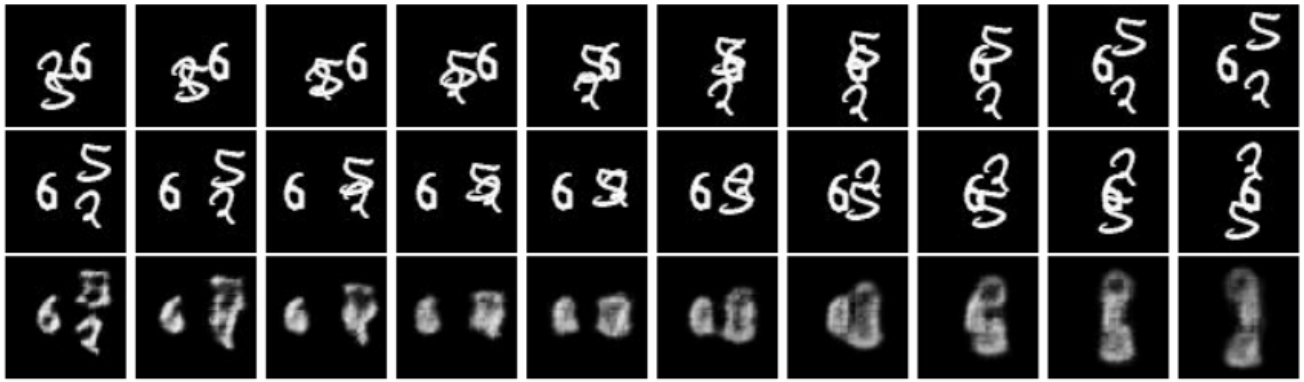

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Spatio-temporal Video Autoencoder

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Spatio-temporal Video Autoencoder

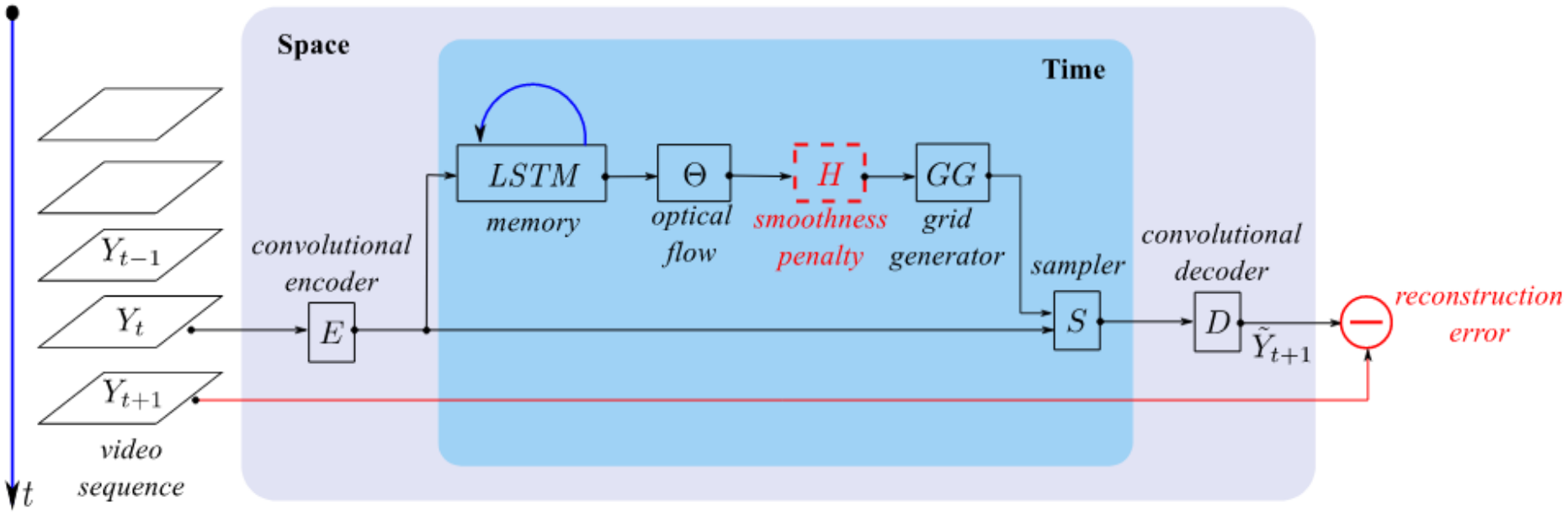

Figure: Spatio-temporal Video Autoencoder Architecture [**?**]

Spatio-temporal Video Autoencoder

Figure: Results of MovingMNIST experiment [**?**]

PredNet

PredRNN