Recurrent Generative Stochastic Networks for Sequence Prediction

Abstract

This is the abstract.

1. Introduction

This is the introduction.

2. Generative Stochastic Networks

This is the GSN section.

3. Recurrent Neural Networks

This is the RNN section.

4. The RNN-GSN

This is the main RNN-GSN section.

5. Experiments

This is the experiments section.

5.1. Sequences of MNIST digits

arbitrary sequences of images.

- Sequence1 is a simple linear sequence of digits 0-9 repeating.
- Sequence2 introduces one bit of parity by alternating sequences 0-9 and 9-0 repeating.
- Sequence3 gives a slightly longer-term time dependency.
- Sequence4 creates a more non-linear sequence with two bits of parity.

5.2. Sequences of polyphonic music

midi stuff.

- Piano-midi.de .....
- Nottingham .....
- MuseData ....
- JSB chorales .....

6. Conclusion

This is the conclusion.

References

Boulanger-Lewandowski, Nicolas, Bengio, Yoshua, and Vincent, Pascal. Modeling temporal dependencies in high-dimensional sequences: Application to polyphonic music generation and transcription. In *Proceedings of the 29th International Conference on Machine Learning*, 2012.

Preliminary work. Under review by the International Conference on Machine Learning (ICML). Do not distribute.