

Ten Simple Rules for Deep Learning in Biology

This manuscript ([permalink](#)) was automatically generated from [Benjamin-Lee/deep-rules@bda3b17](#) on December 6, 2018.

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Abstract

Introduction

Rule 1: Concepts that apply to machine learning also apply to deep learning

Rule 2: Understand the complexities of training deep neural networks

Rule 3: Know your data and your question

Rule 4: Choose an appropriate neural network architecture and data representation

Rule 5: Tune your hyperparameters extensively and systematically

Rule 6: Address deep neural networks' increased tendency to overfit the dataset

Rule 7: Use traditional methods to establish performance baselines

Rule 8: Do not necessarily consider a DL model as a black box

Rule 9: Interpret predictions in the correct manner

Rule 10: Don't share models trained on sensitive data

Conclusion

References
