

# Ten Simple Rules for Deep Learning in Biology

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## Authors

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## **Introduction**

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

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**Rule 2: Use traditional methods to establish performance baselines**

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**Rule 3: Understand the complexities of training deep neural networks**

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**Rule 4: Know your data and your question**

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**Rule 5: Choose an appropriate neural network architecture and data representation**

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**Rule 6: Tune your hyperparameters extensively and systematically**

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**Rule 7: Address deep neural networks' increased tendency to overfit the dataset**

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

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**Rule 9: Interpret predictions in the correct manner**

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

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## Conclusion

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## References

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