

# RNN Questions

Abhi Jain

December 2024

1. What is a Recurrent Neural Network (RNN)?
2. How does an RNN differ from a traditional feedforward neural network?
3. What is the primary advantage of using RNNs for sequential data?
4. What are the challenges associated with training standard RNNs, especially for long sequences?
5. Explain the concept of "hidden state" in an RNN and how it helps the network remember previous information.
6. What is the vanishing gradient problem in the context of RNNs?
7. Name one popular architecture that addresses the vanishing gradient problem in RNNs
8. How does Long Short-Term Memory (LSTM) differ from a standard RNN?
9. Describe the role of the forget gate in an LSTM.
10. How do the gates in an LSTM (input, forget, and output gates) work to control the flow of information?
11. What are some real-world applications where LSTMs are commonly used?
12. What are the common applications of RNNs?
13. Explain the concept of "backpropagation through time" (BPTT) in RNNs and how it differs from traditional backpropagation.