Model	Advantages	Disadvantages	Use Cases	Applications
CNN	Good at capturing local dependencies, efficient computation for parallel processing	May not capture long-term dependencies, not suitable for variable-length input	Text classification, object recognition, image processing	Sentiment analysis, image classification, speech recognition
RNN	Can handle sequential data, can capture long-term dependencies	May suffer from vanishing/exploding gradients, computationally expensive	Language modeling, speech recognition, machine translation	Text generation, speech synthesis, handwriting recognition
LSTM	Addresses vanishing/exploding gradient problem, can capture long-term dependencies	Computationally expensive, not suitable for parallel processing	Speech recognition, machine translation, handwriting recognition	Text generation, speech synthesis, video processing
AttBiLSTM	Handles sequential data with attention mechanism, captures both local and global dependencies	Computationally expensive, may require large amounts of training data	Sentiment analysis, language modeling, machine translation	Text classification, sentiment analysis, chatbots
Transformer	Enables parallel processing, can handle long-term dependencies	May require a large amount of training data, less effective for real-time sequential data	Machine translation, language modeling, text generation	Chatbots, text classification, sentiment analysis