Sequence labeling Problems:

1. POS tagging problems
2. Named entity recognition
3. Semantic role labeling (also referred to as case role analysis, thematic analysis, shallow semantic analysis)
4. Extract pieces of information related to specific task, for example car ads (make, model, year etc.)
5. Bioinformatics, gen labeling
6. Noun phrase chunking

Sequence labeling Approaches:

1. Customary classification methods can be used, however, they are not good practices because they do not consider nearby elements dependency
2. Hidden Markov models (HMM)
3. Conditional random fields (CRF)