

8 Natural Language Processing (ES)

- (a) Give three examples of NLP tasks, apart from sentiment classification, that are typically treated as supervised classification problems. Describe the tasks briefly. [3 marks]
- (b) Describe the Naïve Bayes classifier and how it would apply to sentiment classification. [5 marks]
- (c) What is the “naïve” assumption behind Naïve Bayes and does this assumption hold for language-based classification tasks? [3 marks]
- (d) What are the limitations of the bag-of-words features in sentiment classification? What other features would you use to address these limitations? Illustrate your suggestions with linguistic examples. [5 marks]
- (e) Discuss the evaluation of sentiment classification systems. [4 marks]