

Exercise Sheet 07

(Expert Systems)

Please note: The exercises will be neither collected, nor corrected, or graded.

Exercise 1 – Certainty Factor Model

- a) What is the base idea of the certainty factors approach?
- b) Explain without formulas how belief, disbelief, and certainty factors are related. What do they mean? How do they relate to probability theory?
- c) Why seemed using a probabilistic approach a bad idea for MYCIN?

Exercise 2 – Fuzzy Logics

- a) What is a linguistic variable and why is it useful?
- b) What is fuzzification and defuzzification?
- c) What is a hedge and why is it useful?
- d) Do you think fuzzy reasoning is well suited for longer reasoning chains?

Exercise 3 – Case-Based Reasoning

- a) What is the main idea of CBR?
- b) Briefly explain the 4-phase model.