

The Hong Kong Polytechnic University
Department of Computing
COMP5511 – Introduction to Artificial Intelligence
Semester 1, 2017-18

Assignment 3
Due Date: December 3, 2018

Knowledge in AI is usually represented in one of four popular knowledge representation languages (KRL): (i) predicate logic; (ii) production rules; (iii) semantic networks and (iv) frames. The first two have been covered in class. For (iii) and (iv), you are to look up information in the internet from sites such as, but not limited to, the followings.

<https://exhibits.stanford.edu/ai/catalog/kx265zb9158>

http://www.makhfi.com/KCM_intro.htm

http://www.cogsci.rpi.edu/~mcsham2/MargePapers/McShane_A_Knowledge_2012.pdf

You are to answer the following questions below. Your answers to each question, inclusive of figures and tables, should not exceed one A4 page.

Questions:

- a) What are semantic networks and frames?
- b) In what ways do they satisfy the requirements for a KRL?
- c) Give some examples as to how they are used for knowledge representation.
- d) Compared to (i) and (ii), what are their advantages and disadvantages?

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