

Revision program for the final exam CAB320- 2022

Saturday, 21 May 2022

The 2022 final exam has five Questions:

Question 1 is on the Edit Distance. You should be prepared to fill a Dynamic Programming table (see **Week 07 prac**).

Question 2 concerns search problems and is divided into sub-questions.

The first sub-question asks you to define a state representation for a problem described in plain English. This task has some similarity to the abstraction you had to do in the first assignment in order to identify what information should be put in a state. But here, you will have to consider an agent that can act on several object at the same time.

The second sub-question is about the *completeness* of some search algorithms.

The last sub-question is about *heuristics*. Can you tell whether a heuristics is consistent or admissible?

Question 3 is on Reinforcement Learning (**Week 10 only**). More precisely on tabular methods like Q-learning and SARSA. You need to understand how an action-value $Q(s,a)$ is updated and how a Q table can be used by an agent.

Question 4 is on the application of Bayes Rule (similar to Question 4 of the exam sample).

Question 5 is on the key elements of a Genetic Algorithm (**Week 12**).

No questions on software libraries, in particular, no questions about Tensorflow, Keras or sklearn.