

**Advanced Artificial Intelligence**

CMP9132M | Assessment Item 1

Peter Hart | 12421031

The following report will entail an appraisal and analysis of a range of artificial intelligence techniques and consideration for the application of effective decision-making, problem solving and learning for solving a given issue.

**Task 1.A**

The first task of this assignment involves the ‘rare disease and test problem’ scenario where the environment being considered situates a total of two variables, these variables are the following:

* d: the person has the disease.
* t: the test is positive.

-Introduce the problem at hand

A key issue faced with the proposed problem is the incapacity to calculate the probability of having the disease given the test was positive, otherwise abbreviated as , due to uncertain variables being present in the calculation. This was especially the case as only a total of three different variables are taken as input variables from the user, namely , and .

-Introduce key concepts used to solve the issue

-Refer to academic literature to back up claims

-Explain how solution operates

-Justify strengths and weaknesses of solution