

Artificial Intelligence

Exam

1. What is data mining?
 2. A general scheme of the knowledge discovery.
 3. A classification problem.
 4. Testing classifiers.
 5. General properties of decision trees.
 6. An artificial neuron model.
 7. A multi-layer neural network.
 8. Training neural networks.
 9. The cycle of genetic algorithms.
 10. Genetic manipulations: crossover and mutation.
11. A decision system S is given:

Patient	<i>h</i>	<i>m</i>	<i>t</i>	<i>f</i>
p1	no	yes	high	yes
p2	yes	no	high	yes
p3	yes	yes	very high	yes
p4	no	yes	normal	no
p5	yes	no	very high	no
p6	no	yes	very	yes

- Draw a decision tree, if we test respectively attributes: h, m, t .

12. Two fuzzy sets are given:

$$A = \frac{0.8}{a} + \frac{0.6}{b} + \frac{0.3}{d}$$

$$B = \frac{0.5}{a} + \frac{0.9}{b} + \frac{0.2}{c}$$

- Calculate:

$$\neg A, A \cup B, A \cap B.$$