

Pitanje **5**

Nije još odgovoreno

Broj bodova od 1,00

🚩 Označi pitanje

We use the genetic algorithm to maximize  $f(x)$ . Which of the following we can use as the fitness function?

☐  $1 - f(x)$

☒  $1 + f(x)$

☐  $-f(x)/2$

☐  $-f(x)$

Pitanje **4**

Preostalo vrijeme 0:05:19

Nije još odgovoreno

Broj bodova od 1,00

🚩 Označi pitanje

Let  $w_{ij}$  denote the weight between the output of neuron  $i$  and the input to neuron  $j$  in an artificial network. When backpropagating the error, the weight  $w_{ij}$  will get updated.

**What is this weight update proportional to?**

- ☐ the product between the error of neuron  $i$  and the error of neuron  $j$
- ☐ the sum of the errors of neurons  $i$  and  $j$
- ☒ the product between the output of neuron  $i$  and the error of neuron  $j$
- ☐ the weighted sum of the output of neuron  $j$  and the error of neuron  $i$

Pitanje **3**

Nije još odgovoreno

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🚩 Označi pitanje

Which one of the following problems is not solvable by a single TLU perceptron?

☐ AND

☐ NOT

☐ OR

☒ XOR

Obriši moj odabir

Pitanje **2**

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🚩 Označi pitanje

In an Ant System algorithm, the evaporation of the pheromone trail between nodes  $i$  and  $j$  is modeled as:

- ☒  $\tau_{ij} \leftarrow \tau_{ij}(1 - \rho)$
- ☐  $\tau_{ij} \leftarrow \tau_{ij}(1 + \rho)$
- ☐  $\tau_{ij} \leftarrow \tau_{ij}(1 - \eta)$
- ☐  $\tau_{ij} \leftarrow \tau_{ij} - \rho$

Pitanje **2**

Preostalo vrijeme 0:05:37

Nije još odgovoreno

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🚩 Označi pitanje

Two chromosomes have been selected for crossover:  $K1=001100$  and  $K2=010100$ . Assume there is no mutation. Crossover point is after the first third (from the left). **What is the result of crossover?**

☐ 010101

☐ 000100

☐ 010100

☒ 001100

Obriši moj odabir

Pitanje **3**

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🚩 Označi pitanje

What activation function is used in the TLU perceptron?

What activation function is used in the TLU perceptron?



- ☒ step function
- ☐ linear
- ☐ sigmoidal
- ☐ exponential

Obriši moj odabir

Pitanje **4**

Nije još odgovoreno

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🚩 Označi pitanje

In an ACO algorithm, what does  $\tau$  denote?

- ☐ the probability of selection
- ☐ the probability of mutation
- ☐ the value of the heuristic function
- ☒ the strength of the pheromone trail



We use the genetic algorithm to minimize  $f(x)$ . Which of the following we can use as the fitness function?

- ☒  $1 - f(x)$
- ☐  $1 + f(x)$
- ☐  $f(x)/2$
- ☐  $2f(x)$

Pitanje **6**

Nije još odgovoreno

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🚩 Označi pitanje

The factor  $\gamma$  in reinforcement learning serves for:

- ☐ finding a maximum-value solution
- ☒ discounting future rewards
- ☐ controlling the learning rate
- ☐ forced exploration

## Pitanje 7

Nije još odgovoreno

Broj bodova od 1,00

🚩 Označi pitanje

Let  $w_{ij}$  denote the weight between the output of neuron  $i$  and the input to neuron  $j$  in an artificial network. When backpropagating the error, the weight  $w_{ij}$  will get updated. **What is this weight update proportional to?**

- ☐ the sum of the errors of neurons  $i$  and  $j$
- ☐ the weighted sum of the output of neuron  $j$  and the error of neuron  $i$
- ☒ the product between the output of neuron  $i$  and the error of neuron  $j$
- ☐ the product between the error of neuron  $i$  and the error of neuron  $j$



Preostalo vrijeme 0:03:42

- ☐  $w(i + 1) = w(i) + \eta(t - o)x(i)$
- ☐  $w(i + 1) = w(i) + \eta(t - o)x(i)$

Pitanje **6**

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Broj bodova od 1,00

🚩 Označi pitanje

In an ACO algorithm, what does  $\tau$  denote?

- ☐ the probability of selection
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- ☒ the strength of the pheromone trail

Obriši moj odabir

Pitanje **6**

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Broj bodova od 1,00

🚩 Označi pitanje

In an ACO algorithm, what does  $\tau$  denote?

- ☐ the probability of selection
- ☐ the probability of mutation
- ☐ the value of the heuristic function
- ☒ the strength of the pheromone trail

Obriši moj odabir



☐ forced exploration

Preostalo vrijeme 0:03:39

☐ finding a maximum-value solution

[Obriši moj odabir](#)

Pitanje **5**

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🚩 Označi pitanje

The Rosenblatt's perceptron update rule is as follows ( $t$  – target value,  $o$  – output value):

☐  $w(i + 1) = w(i) - \eta(t + o)x(i)$

☐  $w(i + 1) = w(i) + \eta(t + o)x(i)$

☐  $w(i + 1) = w(i) - \eta(t - o)x(i)$

☒  $w(i + 1) = w(i) + \eta(t - o)x(i)$



Preostalo vrijeme 0:03:35

Pitanje **4**

Nije još odgovoreno

Broj bodova od 1,00

🚩 Označi pitanje

The factor  $\gamma$  in reinforcement learning serves for:



- ☐ discounting future rewards
- ☒ controlling the learning rate
- ☐ forced exploration
- ☐ finding a maximum-value solution

Obriši moj odabir

Pitanje **5**

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🚩 Označi pitanje

Obriši moj oda

Preostalo vrijeme 0:03:51

Pitanje **7**

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🚩 Označi pitanje

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- ☒ the product between the output of neuron  $i$  and the error of neuron  $j$
- ☐ the product between the error of neuron  $i$  and the error of neuron  $j$
- ☐ the sum of the errors of neurons  $i$  and  $j$
- ☐ the weighted sum of the output of neuron  $j$  and the error of neuron  $i$



### Pitanje 3

Nije još odgovoreno

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🚩 Označi pitanje

Two chromosomes have been selected for crossover:  $K1=001100$  and  $K2=010100$ . Assume there is no mutation. Crossover point is after the first third (from the left). **What is the result of crossover?**

- ☒ 000100
- ☐ 010100
- ☐ 001100
- ☐ 010101

Obriši moj odabir

Pitanje **2**

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Broj bodova od 1,00

🚩 Označi pitanje

We use the genetic algorithm to minimize  $f(x)$ . Which of the following we can use as the fitness function?

☐  $1 + f(x)$

☒  $f(x)/2$

☐  $1 - f(x)$

☐  $2f(x)$

Obriši moj odabir

## Pitanje 7

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Broj bodova od 1,00

🚩 Označi pitanje

The factor  $\gamma$  in reinforcement learning serves for:

- ☒ discounting future rewards
- ☐ controlling the learning rate
- ☐ forced exploration
- ☐ finding a maximum-value solution

Pitanje **6**

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🚩 Označi pitanje

Two chromosomes have been selected for crossover:  $K1=001100$  and  $K2=010100$ . Assume there is no mutation. Crossover point is after the first third (from the left). **What is the result of crossover?**

- ☒ 001100
- ☐ 010100
- ☐ 000100
- ☐ 010101