

NATIONAL AVIATION UNIVERSITY
EDUCATIONAL & RESEARCH INSTITUTE
OF AERONAVIGATION, ELECTRONICS AND TELECOMMUNICATIONS
Department of Electronics

“Approved”

Head of the department

_____ Dr. of Sci., prof. Yanovsky F.J.

“ _____ ” _____ 2018

Discipline: “Neurocomputer systems of diagnostics”

In discipline " Neurocomputer systems of diagnostics " is planned implementation of homework (HW). The primary purpose of HW is fixing of knowledge and acquisition of practical skills of student on discipline "Neurocomputer systems of information processing". It is suggested to execute the analysis of materials by students on the select topic, to lay down the comparative table of features of technical decision which is offered from the known sources. A student must be able to protect the HW, defend a novelty and importance of technical decision.

Homework variants

1. Create custom neural network
2. Create competitive layer
3. Create cascade-forward backpropagation network
4. Create distributed time delay neural network
5. Create Elman backpropagation network
6. Create feedforward backpropagation network
7. Create feedforward input-delay backpropagation network
8. Design generalized regression neural network
9. Create Hopfield recurrent network
10. Create layered-recurrent network
11. Create learning vector quantization network
12. Create feedforward backpropagation network with feedback from output to input
13. Create NARX network in series-parallel arrangement
14. Design probabilistic neural network
15. Design radial basis network
16. Design exact radial basis network
17. Create a Dynamic Network
18. Create a Focused Time-Delay Neural Network
19. Create a Distributed Time-Delay Neural Network
20. Create a NARX Network
21. Create a Layer-Recurrent Network
22. Create a Focused Time-Delay Neural Network
23. Create a Distributed Time-Delay Neural Network
24. Create a Hopfield Network
25. Create a Layer-Recurrent Network

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