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Example of the Use of Artificial Neural Network in the Educational Process

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Abstract

An example of an artificial neural network intended for use in the educational process (in such disciplines as "The socio-political importance of artificial intelligence systems", "History and philosophy of science", etc.) is presented. The neural network provides automatic processing of critical reviews written by students for pseudoscientific works, presented in abundance in the current periodical press. This makes it possible to transfer such an innovative form of study as the writing of critical reviews by students to the distance learning mode. An additional function of this neural network is testing of students in order to identify individuals with a psychological type that is appropriate to the scientist in the true meaning of the word.

Keywords

Hirsch index Pseudoscience Critical thinking Passionarity Neural network Profanation of science

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References

1. Shyryn, M.K.: About some problems of higher education in Kazakhstan. In: Proceedings on Global Challenges and Modern Trends in the Development of Higher Education 2013 (2013)Google Scholar

2. Estimated number of universities worldwide as of July 2018, by country.

https://www.statista.com/statistics/918403/number-of-universities-worldwide-by-country/. Accessed 21 May 2019

3. National report on the state and development of the education system of the Republic of Kazakhstan (following the results of 2017).

http://iac.kz/sites/default/files/nacionalnyy_doklad_za_2017_god_s_oblozhkami_dlya_sayta.pdf. Accessed 01 June 2019

4. Mun, G.A.: Ecology and alternative energy - the battlefield of information war. In: Koryo Ilbo, 49, pp. 12–13, 7 December 2018<u>Google Scholar</u>

5.Suleimenov, I., Gabrielyan, O., Egemberdyeva, Z., Kopyshev, E., Tasbolatova, Z.: Implementation of educational information technology to develop critical thinking skills. In: News of the Scientific and Technical Society "Kakhak", vol. 1, no. 64, pp. 63–71 (2019)Google Scholar

6. Mun, G.A., Tasbolatova, Z.S., Suleimenov, I.E.: Pseudoscience as a resource: non-standard approaches in educational information technologies. In: News of the Scientific and Technical Society "Kakhak", vol. 1, no. 64, p. 43 (2019)<u>Google Scholar</u>

7. Gumilev, L.N.: Ethnosphere: the history of people and the history of nature; Ethnogenesis and the biosphere of the Earth (2012)<u>Google Scholar</u>

8. Suleimenov, I.E., Gabrielyan, O.A., Sedlakova, Z.Z., Mun, G.A.: History and philosophy of science (2018)<u>Google Scholar</u>

9. Kalimoldayev, M.N., Mun, G.A., Pak, I.T., Bakirov, A.S., Baipakbayeva, S.T., Suleimenov, I.E.: Artificial intelligence as a driver of the fourth technological revolution. A manual for undergraduates (2018)<u>Google Scholar</u>

10. Karpov, A.V.: Reflexivity as a mental property and a method for its diagnosis. Psychol. J. **24**(5), 45–57 (2003)<u>Google Scholar</u>

11. Khaikin, S.: Neural Networks: A Full Course, 2nd edn. (2008)Google Scholar

12. Savelyeva, O.V., Maslova, M.V.: Passionality as a measure of human activity and society. Philos. Educ. **3**, 163–167 (2008)<u>Google Scholar</u>

13. Keras: The Python Deep Learning library. <u>https://www.keras.io/</u>. Accessed 23 May 2019 14. Abadi, M., et al.: Tensorflow: a system for large-scale machine learning. In: 12th (USENIX) Symposium on Operating Systems Design and Implementation (OSDI 16), pp. 265–283 (2016)<u>Google Scholar</u>

15. Li, Y., Yuan, Y.: Convergence analysis of two-layer neural networks with ReLU activation.
In: Advances in Neural Information Processing Systems, pp. 597–607 (2017)<u>Google Scholar</u>
16. Zhang, Z., Sabuncu, M.: Generalized cross entropy loss for training deep neural networks with noisy labels. In: Advances in Neural Information Processing Systems, pp. 8778–8788 (2018)<u>Google Scholar</u>

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