CENG 492
Computer Engineering Design
Weekly Progress Report – 10
ErikSoft
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Work Done:

This week Alper and Volkan prepared the presentation and continued to develop desktop game application. They also designed a structure which is appropriate for multiuser environment. Because of this design, the desktop application will be easily converted to an online game in which users can play with each other and with our agents. They recorded a video about the user interface which our sponsor provided and they talked to Özgür Alan about the web service updates.

İlkcan and Taylan tried different input and output formats of the artificial neural network. After trying some libraries about machine learning such as Weka, Pybrain, Debellor, Neuroph, we decided to continue with Neuroph. There are many reasons behind this decision. First of all, in Weka, we had memory problems. Debellor offers a solution for this problem, but it is not applicable for our case. In addition, in these libraries, we could not find a way of interpreting more than one output neuron. Pybrain seems a good alternative to these two, but since it is written in Python, it is very hard to read the code. After encountering these, we searched the net about other libraries and found Neuroph.

We also decided that our artificial neural network structure needs 52 input and 52 output neurons. We changed to input structure according to this. After applying this format, we have achieved a learning rate 57% with only 553 data. However, this may be a misunderstanding due to the lack of input number and lack of shuffling. In our case, there can be 2^52 input. Since neuroph is efficient in terms of memory and it enables us to save the network, we can have millions of input to achieve a reasonable learning rate.

Work To Do: Next week, Alper and Volkan will continue to develop desktop application and will do necessary updates to web service in order to handle request of the sponsor.

İlkcan and Taylan will try to increase learning success and meanwhile, they will develop a component to send input to the saved Artificial Neural Network and take maximum output neuron which can be played according to game rules. The tests will be done with this component and the success rate will be determined by this.