NES-NN - Iteration Plan 1

Key milestones

Milestone	Date
Iteration 1 start	11/03/18
1.1 Brainstorming	18/03/18
2.6 Create test implementation	21/03/18
2.9 Train the NN	25/03/18
3.1 Iteration 2 Planning	25/03/18
4.1 Demo implementation to Jim	28/03/18
Iteration 1 end	28/03/18

Iteration Plan Overview

This iteration we plan to get an existing NES NN working, then to reproduce it as a C# implementation.
This will put us in a position to rapidly iterate on Neural Network designs in future iterations.

Work Item Assignments

Work Item ID	Outcome	State	Assigned to (name)	Estimated Hours	Hours worked	Estimate of hours remaining
1.1	Brainstorming & research document completed	In progress	Group	6	6	2
1.2	MarI/O example run successfully by whole team as proof of concept; produced setup guide for getting this running	In progress	Group	4	4	1
2.1	Selected NES emulator and forked it to our Github organisation	Complete	Group	.5	.5	0
2.2	C# NEAT framework selected and forked to our Github	Complete	Josh	.5	.5	0
2.3	Investigate save/load functionality in emulator	In progress	Jason	3	0.1	?
2.4	Create general interfaces between Emulator Controller and Neural Network implementation - document what inputs are required from the game to drive Neural Network	In progress	Group	2	0	2
2.5	Method created to access single address of games ram and store sprites location.	In progress	Loic	4	0	4
2.6	Create test implementation of a NEAT NN using random inputs that predicts some logic gate operation.	Pending	Everyone solo learning	4	0	0
2.7	Create implementation of a NEAT NN for Super Mario Bros	Pending	??	4	0	4
2.8	Map game inputs to NEAT NN implementation for Mario	Pending	??	?	?	?
2.9	Train the NN	Pending	Everyone solo learning	1	0	0
3.1	Iteration 2 Planning Meeting	Pending	Group	4	0	4
4.1	Demo implementation to Jim	Pending	Group	1	0	1

Issues

Issue	Status	Notes

Work Items: Were work items assessed in iteration, did they meet evaluation criteria?

Assessable Work Item	Addressed	Met Evaluation Criteria	Notes
1.1 Brainstorming & research document completed	✓	X	
3.1 Demo implementation to Jim	✓	X	

Other concerns and deviations

No concerns were made apparent. No deviations from iteration plan occurred.