

A4M33BIA: Exercise #3

ANN Assignments

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Robotic Control by NeuroEvolution



<http://www.flightgear.org/>

Robotic Control by NeuroEvolution



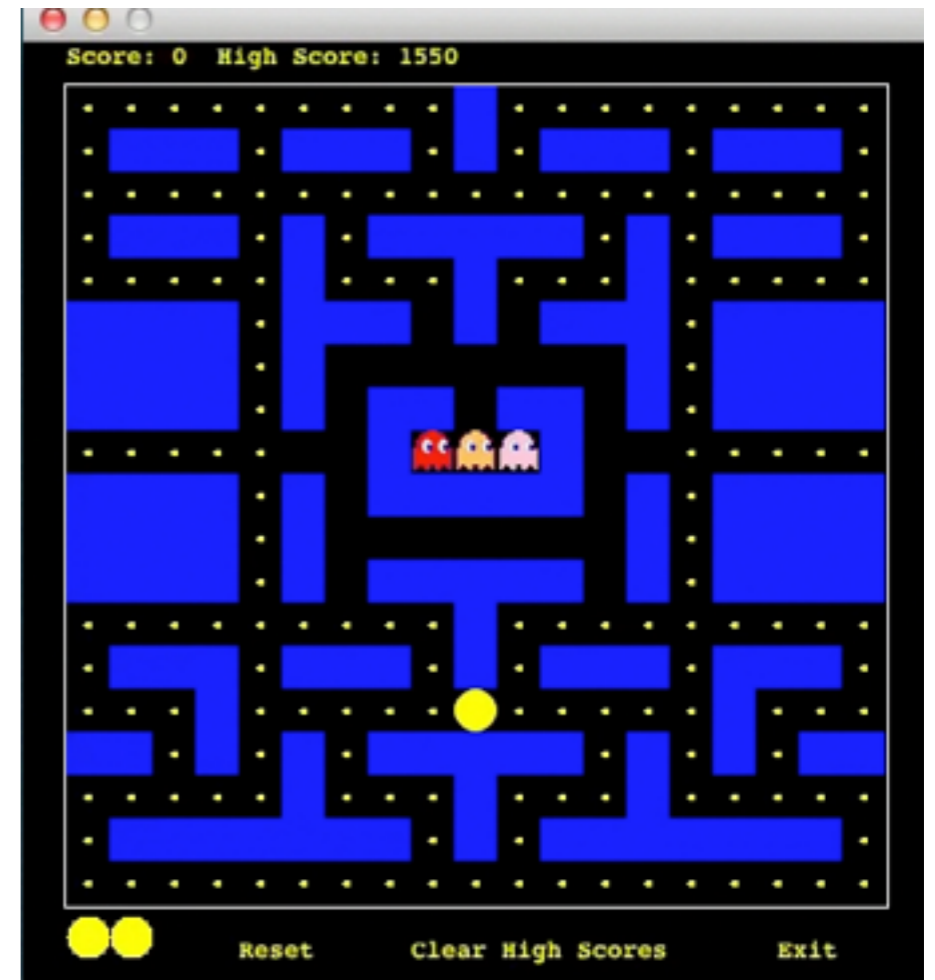
<http://torcs.sourceforge.net/>

Robotic Control by NeuroEvolution



NeuroEvolution

- Design your own neuro-evolutionary algorithm.
- Evolve topology and weights.
- Experiment on simpler reinforcement learning environments.



Numerical Learning Methods

- Choose one of:
 - Quick Propagation (thesis by Minh Duc Do),
 - Resilient Propagation (thesis by Minh Duc Do),
 - Levenberg-Marquardt.
- Find out how they work.
- Implement them and compare to BP.

Data Mining by ANNs

- Choose an interesting dataset.
- Use ANNs for regression/classification/prediction.
- Compare to other paradigms (SVM, decision trees, etc.).