Imitating A Cricket Debugging A Large C-Program Through Shaping: Using A Case Base Of Mirror Neurons In Identifying Human Faces With Bat Ears

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Abstract. Through a short visit to the Mobile Robots Group, Departement of Artificial Intelligence (since the take-over of Division of Informatics), hundreds of papers are acquired that it will take ages to read. Good chats were had, and in the end, there was beer.

1 INTRODUCTION

Following a grim exam, the referee invites the patient to a stay of recovery at an esteemed institution in Edinburgh, Scotland. A period of 10 days in the cold and windy month of February is decided upon. Work prior to the grim exam showed room for broadening, literature- and horizon-wise, and therefore the patient, a semi-autonomous agent with crude sensory-motor abilities and a communication channel, was expected to imitate the behaviour of the other agents, co-habitating the institution.

2 EXPERIMENTS

Several experiments were carried out in an ad-hoc manner. The agent, upon encountering other agents in the environment, would engage in interaction of various kinds, usually ending in a huge gain of information. With the help of a very user friendly case base (see [2] for an interesting application) the agent was, within only a few time steps, able to recognize the faces of several humanoid agents (by using techniques first proposed by [4]). By using imitation as a means for learning basic researcher behaviours (see details in [7]), moreover, at the end of a test run, the agent was able to distinguish the much smaller cricket agents (work in progress, [3]) from its conspecifics with relatively, actually fairly, high success rates. Also, a task of debugging a vast C-program was initiated. This experiment is still running ([5]).

3 CONCLUSIONS

In effect, the group of agents pertaining to the particular environment described above, was collaboratively succesful in shaping (read more in [8]) the learner agent's behaviour, resulting in the last time steps of the experiment in a considerable consumption of energy, retrieved from the research agents' nest located at Cellar Bar. The following morning, several mirror neurons are known to have been fired ([6]).

4 FUTURE WORK

Yes. The sensor profusion problem might have to be addressed in future work. A vast amount of useful information has been collected by the learner agent, partly through visual, but also through aural stimulation. In fact, considerations are being made so as to equip the agent in the future with bat-like pinnae, following work in [1].

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REFERENCES

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[2] Nuno Chagas, *Parameterisation Of Reactive Controllers Through Case Based Learning*
[3] Mark Drake, *Making Life Harder For Cricket Agents*
[4] Arturo Espinosa-Romero *Identification Of Human Faces*
[5] Roy Henderson, *Debugging Inhibitively Large C-Programs*
[6] George Maistros, *Modelling Mirror Neurons*
[7] Yuval Marom, *Imitative Learning In Mobile Robots*
[8] Roger Said, *Different Approaches To Shaping Of Robot Behaviour*