

MSc Major Project - Final Report – 70%

Student Name:	Daonan Hu
Title of Project:	Investigation of agent-based modelling on the simulation of crowd evacuation on the simulation of crowd evacuation
Supervisor:	Gordon Dickers
2 nd marker:	Tim Bashford
Course:	Applied Computing eCommerce Computer Networks Software Engineering Games and Visualisation (please circle)
Project Type:	Survey Review Analysis Experiment Development (please circle)

	Mark %
<u>First Marker's General Comments and Original Mark</u> A working Agent Based Model using Netlogo was produced and a range of experiments undertaken. Some reasonable results produced but reasons for choice of PSO unclear and the implementation of the PSO algorithm itself appears flawed/limited. Fortunately this does not affect the experiments undertaken.	54.5%
<u>Second Marker's General Comments and Original Mark</u> Agreed	55%

Comment After Consultation With Other Marker & Final Agreed Mark	
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Signature: Date:

	Survey	Review	Analysis	Experiment	Development
1. Research-informed Literature					
Introduction	/5	/5	/5	2.5/5	/5
Literature Review	/25	/40	/30	14/25	/15
Comments: The Key areas addressed and discussed in the literature review. There are some language issues here that, once resolved would help in the explanation of some ideas. A more detailed review of fire safety and fire evacuation procedures, policies, etc would have helped to inform the experiment as would a clear description of the PSO algorithm.					
	Survey	Review	Analysis	Experiment	Development
2. Knowledge and Understanding of Subject					
Methodology	/5	/5	/5	2.5/5	/5
Data Collection Process Design	/15	-	-	-	-
Requirements/Design	-	-	-	-	/10

Comments:

The experiment design and its development could have been more clearly described and better organised in the report. A fair grasp of agent based modelling is in evidence as well as a good understanding of the ABM development software. PSO not well described or implemented. The question as to why you need to use PSO is not clearly answered.

Experiment results show a reasonable understanding of the problem and a fair analysis. A good experimental apparatus was produced.

	Survey	Review	Analysis	Experiment	Development
3. Analysis					
Problem Definition	-	-	/10	-	-
Results and Discussions	/30	/30	/30	16/30	/30
Conclusions and Recommendations	/10	/10	/10	5.5/10	/10
Comments: The analyses of the results provided could be clearer in places though the experiments undertaken are in general reasonable and the results appear to be realistic given the environment. Conclusions in general are appropriate and reflect the results. The use of marshals to guide the crowds resulted in some interesting results but more could be made of this when comparing with existing literature. No analysis of PSO results.					
	Survey	Review	Analysis	Experiment	Development
4. Practical Application and Deployment					
Development	-	-	-	-	/15
Experimental Design	-	-	-	9/15	-
Comments: The ABM software developed as part of the experiment was quite detailed though it would have been good to include further simulations of smoke, etc. Nevertheless some good results documented here. The experimental design could have been more detailed and incorporated further work related to PSO and flocking algorithms.					

	Survey	Review	Analysis	Experiment	Development
5. Skills for Professional Practice					
Reflection	/5	/5	/5	2/5	/5
Quality of Report	/5	/5	/5	3 /5	/5
Comments: Quite well structured. Language an issue at times which hampered explanations and discussions at times. References very good. Reflection could be more detailed.					
TOTAL:	/100	/100	/100	54.5/100	/100