

Department of Physics and Astronomy  
University College London

PHAS0030 Mini-Projects, Session 2019-20  
Student Assessment: Rob Verheyen

Student number: 18018699  
Project Title: Cellular Automata

### **Logbook 8/10**

The logbook is very comprehensive and clear. It includes frequent updates that very clearly describe the students thinking as well as noticeably clean and clear code.

### **Competence and ability 13/15**

For the first part of the exercise, the student has considered all possible evolution rules and discusses their result on an initial configuration. Discussion of the spatial and temporal is also included, showing some nice examples of irregular and regular behaviour.

In the Game of Life, the explanation and implementation appear sound, but the discussion of its results is not very comprehensive, restricting itself to some symmetric configurations and behaviour of a random initial state.

For the forest fire simulation, the implementation appears similarly sound, but in this case a more comprehensive study of its behaviour is performed, including a large number of variations in the probabilities  $p$  and  $f$ . The student notices interesting behaviour at low values of  $f$  and investigates further, leading to relevant conclusions

### **Formal Report 12/20**

The writing style is generally strong and clear, with occasional minor grammatical and stylistic errors.. The report is clearly separated in sections on introduction, theory, separate sections on the different exercise parts, and a discussion and conclusion. The figures look clear and clean and contain proper captions. In particular, I think the figures detailing the results of the forest fire simulation are very insightful. Proper citations to references are included.

**Total: 33/45**