COMP6590 Practical Project Assessment

This assessment consists of a practical computational creativity project consisting of designing and implementing a computational creativity system; explaining the connections between your ideas and other computational creativity systems, and ideas from the research literature in this area; and evaluating and reflecting on the results.

By a *computational creativity system,* we mean a system that uses some artificial intelligence or generative technique to create some output that an external observer might reasonably consider to be the product of creative work, or else a system that attempts to evaluate and/or explain the creativity of outputs from a system. In short, we want to you *make something that makes something*. So, for example, a project that consisted of making a game would not be acceptable; a program that used some kind of AI to generate game content (rules, stories, environment, music) would be.

You must produce and submit:

1. An **initial project proposal,** on which you will get feedback to help you develop your ideas. This should consist of a project title, and a brief project description (around one side of A4) where you explain your project idea, explain how this links to theories of creativity such as those discussed in the lectures and seminars (giving references), and an explanation of how you will evaluate the practical work i.e. how will you decide whether it is successful and whether it is acting as a creative system.
2. A piece of **practical programming** in which you design and implement the project idea in your initial project proposal, taking into account the feedback given from the initial project proposal. You are free to use any language for this—if you want to use something that cannot run on the standard University desktop please email Anna [A.K.Jordanous@kent.ac.uk](mailto:A.K.Jordanous@kent.ac.uk) for permission beforehand (usually such requests will be accepted). Feel free to use open source libraries etc., but please be very careful to explain in your report which parts of the code are yours and which are from elsewhere. You need to provide examples of the code’s output/artefacts produced, and instructions on how to run the code.
3. A **written report** (maximum 8 pages including all images, references, appendices etc.), containing:
   1. a description of how you designed, implemented, and tested the software,
   2. a discussion of how your software links to theories of creativity such as those discussed in the lectures and seminars and your wider reading (make sure that you give clear references)
   3. an evaluation of and reflection on how your system works and the results generated by your system; you will be expected to consider both the quality of what the system does and the creativity of the system.

Please take into account the feedback we give on your initial project proposal when writing your report.

1. A brief **video** (at most five minutes) demonstrating your software working. Typically, this will be a screencast of the application running, together with a commentary explaining what is happening and how it works. This is to show us the software in operation; we do not assess video quality in any way.

The COMP6590 module is assessed 100% by coursework, and this coursework is worth 80% of the marks. The other assessment (seminar presentation and participation) is worth 20%.

For this assessment there will be **a single overall mark** based on components 2, 3, 4 above. (The initial project proposal, component 1, is designed to be formative: to give you advice about the development of the project). You will receive one overall mark for the entire project; you will not an individual marks breakdown for different submitted parts. The marking scheme is available on Moodle.

Within the constraints that your system must be intended to be a computational creativity system, you have a free choice of topic. If we think that your project doesn’t fit with this, then we will let you know when you submit your initial project proposal (and, give you some advice about how to adapt it). If you want to discuss ideas before you start, then by speak to Anna or Jim after a lecture or by emailing Anna on [A.K.Jordanous@kent.ac.uk](mailto:A.K.Jordanous@kent.ac.uk) .

Example project ideas you could try (or you can choose your own idea):

* A system that composes music
* A system that creates images
* A system that writes stories or poems
* A system that writes narratives/descriptions inspired by images
* A system that performs or improvises music
* A system that can perform a creative scientific/mathematical task such as generating proofs
* A system that generates character behaviour in a game
* A system that generates game content
* A system that carries out self-evaluation of what it generates (doing one of the above creative tasks or another task of your choice)
* … etc! There are lots of examples of past projects on the COMP6590 Moodle page.

Your report should contain (at least) the following sections:

* **Abstract**: approx. 150-250 words summarising your whole report
* **Introduction**: introducing what your report will tell us, setting the scene
* **Background**: Review of related work—research papers, and other computer systems—and how these are relevant to your work
* **Methodology and design**: How you have designed and implemented your creative software
* **Results**: A summary of what you have achieved in the practical work – outputs, code summary and any other relevant comments
* **Evaluation**: How you have tested/evaluated your creative software; results of testing; a discussion of the evaluation in terms of the end goal of producing creative software (and any relevant issues arising). You should use at least one of the creativity evaluation frameworks discussed in the lectures.
* **Conclusions**: summary of what you have learned/achieved in this work, what further work might be possible to build on what you have done, and overall what conclusions you can draw from this work

## Submission of coursework

The initial project proposal is due on **Thursday 17th March, 23:55.** Please submit this as a single pdf or Word file on the COMP6590 Moodle submission for the coursework submission.

The remaining components of the assessment are due on **Tuesday 10th May, 23:55.** There are two parts to submission: 1. Please submit your written report to the Turnitin link on the COMP6590 Moodle. 2. Please also submit a single zip file on the COMP6590 Moodle, containing the following files:

* Your code and all accompanying files, registration codes etc needed for us to run your code.
* Instructions on how to run your code (if we are unable to run your code, you may be required to demonstrate your code running to us).
* Examples of creative artefacts that have been produced as output of your code
* Video (or a link to a video) demonstrating your code in operation and how it generates results **and** a pdf or Word file on the COMP6590 Moodle, containing the following file:
* Your written report documenting this project

## Late or non submission of coursework

The penalty for late or non submission of coursework is normally that a mark of zero is awarded for the missing piece of work and the final mark for the module is calculated accordingly.

## Feedback

Formative feedback will be given via Moodle on the initial project proposal to help you with the remainder of the project. **The practical classes in the second half of the term will also be dedicated to working on the project, with the class supervisor available to offer guidance.** Feedback on the final submission will also be given via Moodle, shortly after marks are released.

## Plagiarism and Duplication of Material

Senate has agreed the following definition of plagiarism: "*Plagiarism is the act of repeating the ideas or discoveries of another as one's own. To copy sentences, phrases or even striking expressions without acknowledgement in a manner that may deceive the reader as to the source is plagiarism; to paraphrase in a manner that may deceive the reader is likewise plagiarism. Where such copying or close paraphrase has occurred the mere mention of the source in a bibliography will not be deemed sufficient acknowledgement; in each such instance it must be referred specifically to its source. Verbatim quotations must be directly acknowledged either in inverted commas or by indenting.*" The work you submit must be your own, except where its original author is clearly referenced. We reserve the right to run checks on all submitted work in an effort to identify possible plagiarism, and take disciplinary action against anyone found to have committed plagiarism. When you use other peoples' material, you must clearly indicate the source of the material using the Harvard style (see <http://www.kent.ac.uk/uelt/ai/styleguides.html>).

In addition, substantial amounts of verbatim or near verbatim cut-and-paste from web-based sources, course material and other resources will not be considered as evidence of your own understanding of the topics being examined.

Work will be submitted to Turnitin for the identification of possible plagiarism.

The School publishes an on-line Plagiarism and Collaboration Frequently Asked Questions (FAQ) which is available at: <http://www.cs.kent.ac.uk/teaching/student/assessment/plagiarism.local>

## Learning objectives

This coursework is designed to contribute to the following learning objectives of COMP6590:

* 11.3 Write software that implements computational creativity techniques, grounded in an understanding of research in the area, applied to a variety of domains in the arts and sciences.
* 11.4 Describe, employ and debate methods for evaluation of computational creativity.
* 11.5 Identify appropriate contexts for using computational creativity, and design an appropriate system for that context.
* 12.1 Make effective use of general IT facilities.
* 12.2 Engage with research literature and other information sources.
* 12.3 Communicate technical issues clearly in written and spoken formats.
* 12.4 Manage their own learning and development, including time management and organisational skills.

**Good luck! We hope you enjoy doing the project!**

**Anna Jordanous and Jim Ang, Spring Term 2021/22**

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