

University of London
Creative Computing
CO3346 Sound and music
Coursework assignments 1 & 2 2018-19

Introduction

The following two coursework assignments are designed to enable you to obtain a broader and deeper understanding of specific material in this course. To obtain the most benefit, you should read around the topics, rather than just reading enough to enable you to answer the particular questions asked.

This provides a valuable opportunity to become more expert in key areas of the subject than is otherwise possible when only studying towards examinations. It is also an opportunity to further develop your creative portfolio.

Academic approach to discussion questions

You are expected to approach the coursework assignments in this unit in a rigorous and academic way. While it is fine to use Internet search tools and Wikipedia to gain a broad understanding of a topic, it is also essential that you use reliable academic references to obtain your information. We also expect you to approach the work in an informed and critical manner, and to develop an ability to form views based on evidence (substantiating any strong claims you may make), and to argue in support of your claims.

You must make sure that you use and cite your reference material appropriately. You can look at the end of any journal or conference paper to get an idea of how to do this. This is a Level 6 course, and as such, we fully expect students to be able to cite and reference material correctly.

It is important that your submitted coursework assignment is your own individual work and, for the most part, written in your own words. You must provide appropriate in-text citation for both paraphrase and quotation, with a detailed reference section at the end of your coursework assignment (this should not be included in any word count). Copying, plagiarism and unaccredited and wholesale reproduction of material from books or from any online source is unacceptable, and will be penalized (see: [How to avoid plagiarism](#)).

Coursework assignment 1 – Computational creativity and academic investigation

In this first coursework assignment, you are required to investigate a particular topic of work within the area of computational creativity. It is essential that your answers are written as complete paragraphs, and that you cite and reference correctly.

1. First, you must read around the topics to obtain a broad background understanding of the area of computational creativity, and to answer the following questions:

- a. What is this general area of computational creativity? How would you explain it to a knowledgeable non-expert?

[5 marks]

- b. The area consists of interest in music, as well as other creative forms. Describe three distinct creative areas (apart from music), and include citation to appropriate academic publications in the area. Also briefly describe how they are linked, if they are.

[10 marks]

- c. What criteria exist to evaluate whether a computational artefact exhibits creativity? Discuss the advantages and disadvantages of specific approaches that you have found, again including appropriate citation.

[9 marks]

- d. Explain the concept of citation index, and discuss whether it is useful or not.

[6 marks]

2. List, with full references, three academic papers in the field of computational creativity in the context of music or sound, which you believe are essential to know about if you want to understand the area. Relate this to the concept of citation index if appropriate. For each paper, explain briefly what it is about, and justify why you are including it in your list. Make sure that none of the papers you list are among those mentioned below in question three.

[10 marks]

3. Choose one of the papers listed below to read and fully understand. Then respond to the following questions, with reference to the paper you have chosen:

- a. What is the overall goal of this area of research?
- b. What is the specific goal of the particular experiment described? If this is not a paper that describes experimental research, then you should say what the specific purpose of the paper is.

- c. What background research do(es) the author(s) build on?
 - d. Of the list of references, which do you consider to be the most significant contributors to the work described in the paper? Justify why you think so.
 - e. Briefly describe the experimental procedure. Again, if this is not a paper that is about an experimental approach, then you should describe the research procedure used.
 - f. What were the results of the experiment? If the paper is not about experimental work, then indicate this explicitly.
 - g. What conclusions did the author(s) draw?
 - h. What questions were left unanswered?
 - i. Suggest one or two problems that might invalidate the entire experiment or, if the paper is not about experimental work, the conclusions drawn from it.
 - j. Suggest an experiment that might clarify or extend this work; or if you have chosen one of the two earlier publications, comment on any more recent work that might contradict any assumptions or claims made.
-
- Haenen, J. and Rauchas, S. (2006), 'Investigating artificial creativity by generating melodies, using connectionist knowledge representation' in *Proceedings of 3rd Joint Workshop on Computational Creativity*, ECAI, (pp. 33–38), Riva del Garda, Italy. (available on the VLE)
 - McLean, A. and Wiggins, G.A. (2010), 'Live coding towards computational creativity' in *Proceedings of the First International Conference on Computational Creativity*. Madrid, Spain. Editors: Ventura et al.
 - Wiggins, G.A. and Forth, J. (2018), 'Computational Creativity and Live Algorithms' in McLean, A and Dean, R. (eds.) *The Oxford Handbook of Algorithmic Music*. Oxford, UK: Oxford University Press. ISBN 9780190226992.

[60 marks]

[Total: 100 marks]

What to submit:

A single PDF document containing your written answers to all the questions and discussions asked for. The file should be named using the following convention:

YourName_SRN_CO3346cw1.pdf, where YourName and SRN are your full name as it appears on your student record and your UoL student number respectively. Make sure you clearly indicate, through headings, which parts of the PDF are answering which questions.

[END OF COURSEWORK ASSIGNMENT 1]

Coursework assignment 2 – Concrete exploration

Based on the work you did for coursework assignment 1, you are now asked to develop a system or artefact that explores an area related to computational creativity. This must be strongly linked to creativity and sound or music, but does not have to focus exclusively on this area. For example, if you wish to link the concepts of humour and sound, in your exploration, this is feasible but you would need to include a strong sonic component. You should work in a way that reflects your understanding of how the researchers who wrote the referenced papers worked. Cite any connections that are relevant, and make it clear what has motivated your work. It should be apparent to the examiners what you are trying to do, and why.

1. Use either the paper that you read fully, or any other work that you explored when you answered the first two questions in coursework assignment 1, as the basis for developing a creative sonic artefact or system. You must be explicit about which paper(s) you are basing the development on, and the links to your artefact or system. Describe what you intend to do, and how it is motivated by your work in coursework assignment 1. Also be very clear about how it relates to the broad area of computational creativity.
This is basically you designing a brief that a creative developer can then take forward. Re-read material from earlier years of study to help you with this if necessary.

[20 marks]

2. Develop the artefact or system, in the language or system you feel is most appropriate. It must be either software that has been prescribed for use in one of the Creative Computing courses, or it must be freely downloadable from the Internet. Make sure you can justify your choices and describe what you have done, as well as explaining how your system or artefact works. A significant part of how you will be assessed is on your ability to connect the research you have read with the work that you then produce.
It is essential that you provide example outputs of your system, or example sonic artefacts, and include some discussion of these in the critical evaluation (see next point).

[70 marks]

3. Provide a description and critical evaluation of what you have done, indicating the successes and also identifying how you might develop what you have done further.

[10 marks]

[Total: 100 marks]

What to submit:

A single PDF containing your description of your proposed development; clear instructions as to how the Examiners can run your system or listen to any music you may have produced; your description of how it works and your critical evaluation of what you've done. The file should be named using the following convention:

YourName_SRN_CO3346cw2.pdf, where YourName and SRN are your full name as it appears on your student record and your UoL student number respectively.

A single ZIP file containing the code for the system you developed (well commented) together with examples of the music it can create if relevant. The file should be named using the following convention: **YourName_SRN_CO3346cw2.zip**

[END OF COURSEWORK ASSIGNMENT 2]