INT104 – Artificial Intelligence

Coursework 1

Introduction

Automatic music generation is a task that generates music melodies / accompaniment with computer. Usually, a dataset containing multiples pieces of music is used for training a model of artificial neuron networks. The resulting model is then used to generate music with an input of random noise / dedicated meta-data.

Currently, there are many challenging issues in generated music such as the lack of music structure (due to the difficulties on modelling long-term dependency in music), the existence of inharmonic in music (due to the difficulties on modelling relationship between notes in music) and the uncertainty in music style (as the model fails to capture temporal relationship between music events representing music style). You are now required to write a ***one-page*** essay (excluding reference list) that discusses the possible development of automatic music generation methods in near future. The proposed development in the essay **must be supported by a review of existing literatures**. Please note, it is not necessary to address technical details in your essay.

If you are have no ideas on the specific developments to address in your essay, you may choose one of the following candidate topics:
- Generating music with music structure
- Generating waveform based singing voice with expressiveness
- Using a single model to generate music in different styles
- Detecting computer generated music (either symbolic music or waveform based music)

However, you are encourage to propose your own topic for this coursework.

Marking criteria

Marking Criteria	Item	Weight	Description
Basic (30)	Title	5	The paper should have a title to show the topic of your essay. The title should be properly capitalised.

Basic (30)	Formatting	10	The structure of the essay should be in a unified style. The essay must be easy to read. The main body of the essay should not exceed one page excluding reference list. It is not necessary to include an abstract in the essay. Format that recommended (non-strict requirements): • Font size: 10 ~ 12 • Line spacing: 1 ~ 2 • Alignment: Justified • Font: Times New Roman, Tahoma, Arial • Margins: Conventional or narrow
	Reference	15	The number of references should be no less than 10. At least 5 academic references are required. 10 points will be deducted if the total number of references is less than 5. The majority of literature cited in the essay should be published in recent years It is recommended to use *IEEE* style for your references. Other reference styles are also acceptable.
Language (20)	Spelling	10	The spelling in the paper should be completely correct. Any incorrect spelling can result in a loss of marks.
	Grammar	10	The language used in the essay must be academic language.
Content (50)	Point of view	15	There should be a clear view point in the essay. The point of view could be selected from the given list or be self-proposed.
	Support and coverage of topics	15	The paper should be focused on the selected topic at all times. References and statements must support the proposed topics.
	Organization	10	The paper should be well organised showing a clear structure of the essay.

	Critical thinking	10	The paper should have sophisticated and detailed analysis, showing ability to critically evaluation arguments. It requires the writer to be able to analyze based on facts and real data, and not to blindly quote opinions and conclusions in other papers.
Repetition check			This coursework will be checked by Turnitin check to show the repetition rate of your submission. If a repetition rate higher than 20% is founded, a judgment of 0 mark will be awarded for this coursework.

Submission

1. Only submissions in PDF format are accepted.
2. Submit your lab report via the dedicated Learning Mall coursework link.
3. Please name your submission file as ID_FirstName_LastName_C1.pdf (e.g., 1234567_FirstName_Surname_C2.pdf).
4. Late submission is NOT allowed.