Music 5

Lecture 7

Thursday, May 21, 2020

Lecture Outline

1. **Announcements**

2. **General Information**

3. **Module 8: New Music (Machine Learning)**

4. **Stage Assignment**

Announcements

- **The following items are DUE before Sunday, [May 24](#) at 11:59 pm:**
  - Module 8 Quiz: AI Part 2 Machine Learning
  - Module 8 Stage Assignment

- We will perform the Stage assignment piece during today's live session

General Information: Assignments

- Week 1: Writing (World Music, Art of Noises) - **5**
- Week 2: Studio (Beautiful Sound) - **5**
- Week 3: Writing (Political Economy, Music of Environment) - **10**
- Week 4: Studio (Sound Walk) - **15**
- Week 5: Stage (Clapping) - **5**
- Week 6: Writing (Glitch and Remix) - **5**
- Week 7: Stage (Soundpainting) - **5**
- Week 8: Stage (Great Learning) - **5**
- Week 9: Studio (Magenta) - **5**
- Week 10: Final Project (Studio or Stage + Writing) - **20**

General Information: New Policies

Late Assignment Policy

0-24 hours late: 10% deduction

24-48 hours late: 20% deduction

>48 hours late (but before June 5 at 11:59 pm): 30%

After June 5 at 11:59 pm, all late assignments will receive a score of 0%

Assignment Resubmission Policy

If you received a score below 70% on any of the assignments in Modules 1-7, you may resubmit your assignment to receive up to a maximum score of 70%. To receive regrading, you must send me an email indicating which assignments you resubmitted and what changes you made.

Module 8: New Music (Machine Learning)

Module 8: Objectives

1. Define the concept of musical grammar and how it is used for computer modeling of style
2. Give examples of works that use Machine Improvisation
3. Explain the goals of research about Creative Music Machines

Module 8: Live session topics

- Review the **Magenta Website** and the current tools
- Choose a few of the Magenta tools, install them, and show how they are used
- Explain how to perform **Cardew's piece and the conceptual idea**
- Do a **Zoom performance** with the TA as leader
- Discuss the final project requirements and ideas for projects

Today, we will focus on the items shown in bold above.

Module 8: Google Magenta

- **Magenta is a creative project at Google that aims to make music and art using machine learning.**

- Magenta website: https://magenta.tensorflow.org/

- Machine learning is a discipline that deals with how computers learn to do a wide variety of useful tasks, such as facial recognition, disease diagnosis, and sound synthesis. It has risen tremendously in popularity over the last 10 years in various fields, including science, engineering, medicine, visual arts, and music.

- The video below describes a synthesizer built as part of Magenta called **NSynth**: https://www.youtube.com/watch?v=iTXU9Z0NYoU&feature=emb_title

Stage Assignment

Module 8: Stage assignment (guidelines)

- **Description:** Perform Cornelius Cardew's *The Great Learning, Paragraph 7*. The lyrics of the music come from *The Great Learning*, which is one of the four canonical books of Confucianism.

    - If you actively and attentively participate in the performance during today's live session, you will receive a perfect score on this week's Stage assignment

    - If you don't participate in the performance during today's live session: I will assign you to a group, and you can meet together over Zoom to perform the piece at a later time. **One of your group members must submit the following to Canvas: (1) a video recording and (2) a list of who actually participated in the performance**. As with last week's performance, if one or more of your group members chooses not to participate, the remaining group members will not be penalized for having fewer participants.

Module 8: Stage assignment (the piece)

Here is a performance of the piece: https://www.youtube.com/watch?v=9fO_HbjkZrA

Module 8: Stage assignment (the piece)

- *The Great Learning* consists of several parts:

  - Paragraph 1: https://www.youtube.com/watch?v=2k1m1ITcljM&list=RD2k1m1ITcljM&start_radio=1&t=1238
  - Paragraph 2: https://www.youtube.com/watch?v=txlZL8vgQak
  - Paragraph 3 & 4: https://www.youtube.com/watch?v=P2HS1ERozkg
  - Paragraph 5: https://www.youtube.com/watch?v=sCNz1Igw3Jo
  - Paragraph 6: https://www.youtube.com/watch?v=aZuBmZrEzSc
  - Paragraph 7: https://www.youtube.com/watch?v=qIBG1A9B3lw

- **We will perform "Paragraph 7" today.** In this section of *The Great Learning*, a dissonant cloud of pitches becomes more or less consonant over time. (The composer intended the music to have some political meaning).

- For more details about the piece, see: https://www.newmusicnewcollege.org/cardew.html

Module 8: Stage assignment (the piece)

"Listening and watching a performance of *The Great Learning, Paragraph 7* is a bit like watching the gulf from the shore. Though the larger shape of the water seems to change so slowly that it can scarcely be perceived, the details are constantly in flux: the waves crest and fall and the wind alters the water's surface in countless ways. Also, one's experience of the water changes, depending upon one's location: the water's churning takes on one quality when viewed from a distance, yet can seem utterly different while walking the shoreline, dodging the waves." - **Stephen Miles**

Module 8: Stage assignment (ambient music)

The Great Learning, Paragraph 7 has some sonic similarities with popular ambient music, including music by the rock band Sigur Rós (see link below). One key feature of ambient music is that it emphasizes atmospheric sounds over traditional melodies.

Glósóli by Sigur Rós: https://www.youtube.com/watch?v=Bz8iEJeh26E

Module 7: Stage assignment (Zoom)

- **A couple comments about the time delay in Zoom:**

  - There will likely be some time delay doing this assignment over Zoom. However, it shouldn't have too adverse of an effect on your performance.

  - The delay would be more of a concern if the performers all needed to follow the same tempo. However, in this piece, the performers can sing or play tones with unspecified tempos.

Module 7: Stage assignment (performance)

- **We will now read the performance instructions, rehearse the piece, and then perform it all the way through**

- If you actively and attentively participate in the performance, I will award you full credit for this assignment. Please be aware that I will take attendance before <u>and</u> after the performance to verify that you participated, so **please stay until the end**.

Module 8: Stage assignment (instructions)

Professor Dubnov's instructions (see Canvas):

In a group of at least 5 performers (including the leader), follow the instructions in Cardew's score and perform the piece. **Take your time to move through each line and try to choose every time one of your partners as the target of your imitation.** In a physical performance, you would move closer to that person; so, in the online version, try to communicate visually and listen to each other. Feel free to extend the roles of the musicians and also **add musical instruments** to the reading and singing. Even though there are no instructions in the score regarding how to add instruments, try to improvise by giving a musical interpretation that follows the text if you choose to play and instrument. **Rehearse the piece** at least once before performing. The leader should clearly explain and read aloud the instructions to the ensemble members to make sure all agree and understand how to perform the piece. You may want to look up some performances on YouTube to give you ideas on different manners of interpreting the piece. As usual, record your improvisation and submit it online if you do not attend the live session.

Composer's instructions: https://www.newmusicnewcollege.org/PDFs/Cardew_score.pdf

Questions