

Music 5

Lecture 9

Thursday, June 4, 2020

Lecture Outline

1. Announcements
2. General Information
3. Module 10: New Music (The Future of Music)
4. Final Project

Announcements

- The deadline to turn in **late assignments and assignment resubmissions** is Friday, [June 5](#) at 11:59 pm
- The following **module items** are DUE before Sunday, [June 7](#) at 11:59 pm:
 - Module 10 Quiz
- **The final project** is DUE before Tuesday, [June 9](#) at 11:59 pm

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 (Sound Painting) - **5**
- Week 8: Stage (Great Learning) - **5**
- Week 9: Studio (Magenta) - **5**
- Week 10: Final Project (Studio or Stage + Writing) - **20**

General Information: Policy Reminder

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 10: New Music (The Future of Music)

Module 10: Objectives

1. Explain the concept of Birkhoff's Aesthetic Measure in terms of order and complexity in music
2. Define communication model and its role in music perception
3. Define and explain how computers implement Music Information Dynamics
4. Give examples of Cultural Acoustic Sensibility and explain it in terms of information processing

Module 10: Live session topics

- Reinforce concepts of Aesthetics, Communication and Anticipation in music
- Discuss rubrics for evaluation of **final project** in terms of these concepts
- Discuss how to self-report the progress
- Discuss how to write a description of the piece in terms of techniques and aesthetics
- Discuss the details of presentation and submission of final projects

Module 10: The Future of Music

- **What might the future be for music, and how might computers shape that future? Here are a few predictions:**
 - Given the success and popularity of machine learning techniques in creating **new and original music technology tools** (e.g. Google Magenta), it's likely that in the near future we will see musicians adopting these tools in their works.
 - Aside from creating new music technology tools, machine learning may enhance our creative cognitive abilities through such devices as **brain-computer interfaces** (e.g. Neuralink implants). Although our creative cognitive abilities are already enhanced by current computer technology (e.g. laptops, tablets, smartphones, etc), the data transfer rate is relatively slow. Brain-computer interfaces might allow us to access and compute information at much higher speed.
 - Physical modeling sound synthesis is a computational approach for generating sounds based on physics principles. This approach has shown promise for creating **hyper-realistic sounds** for computer-animated films, video games, and virtual/augmented reality.

Final Project

Final project (guidelines)

- **Description**: create a **3-7 minute musical piece** and write a **2-3 page essay** that explains and analyzes your musical piece.
- Read the entire final project prompt on Canvas so that you understand exactly what is needed. Here are important **general** points to bear in mind:
 - Your submission is due before Tuesday, June 9 at 11:59 pm (less than 13 days away)
 - Both the musical piece and the essay must be **your** work (if you choose to do a performance, **you** must compose the music and **you** must perform it)
 - To earn full credit, your musical piece and essay must each **build upon your previous assignments**. In other words, you should use tools, techniques, and concepts you learned in previous assignments to create something of a higher quality than your past submissions

Final project (guidelines)

- Here are important points about your **musical piece**:
 - You may produce a piece of music on your computer or record a live performance of yourself. (Please follow the specific guidelines outlined in the project prompt for each case)
 - Before you spend several hours working on a piece, bear in mind that **you must be able justify and explain your musical piece using concepts from previous course modules in your essay** (e.g. Attali's four codes, Futurism, aesthetics of failure, remix/mashup, etc)
 - Your musical piece will be graded using the following criteria:
 - Originality: something we've discussed but haven't done (e.g. a remix/mashup, glitch)
 - Complexity: **at least 5** different sounds/compositions or performance/editing techniques
 - Well-formedness: your piece must build upon concepts we've covered in class

Final project (guidelines)

- Here are important points about your **essay**:
 - Your essay must consist of (1) an explanation and (2) a critical and comparative analysis
 - Your explanation should describe (A) your choices of sound materials, (B) organization principles, and (C) political or social statements regarding the place of your composition in today's culture
 - Your critical and comparative analysis should build upon Parts (B) and (C) of your explanation above. You should relate your work to at least one reading we discussed in the course (Russolo, Bakan, Attali, Schafer, Cascone, Navas, or Stockhausen)
 - You must demonstrate a clear understanding of at least one course concept in your essay
 - **PLEASE ORGANIZE YOUR ANSWERS USING THE NUMBERS AND LETTERS ABOVE**

Final project (Q&A)

Q: Can a performance group consist of people not in the class?

A: Yes, the performers may be people who are not enrolled in the class. The only condition is that you (and any other students enrolled in the class who are in your group) be the sole author(s) of the work, including the creation of the composition you perform as well as the writing of the essay.

Q: May we use smartphone apps and a digital audio workstation (DAW) to create our musical piece?

A: Yes

Final project (Q&A)

Q: May I add pictures to my essay to explain concepts?

A: Yes. Just make sure that the actual text of your essay is two pages long. In other words, pictures don't count towards your two-page length requirement.

Final project (sound samples)

- You may download sound samples from either of the sources listed below or from any other online source as long as you cite the source if required by copyright:
 - Past UCSD course: <https://chadmckell.com/mus15>
 - Freesound: <https://freesound.org/>
- You may also use any sounds you personally recorded or any sounds you previously submitted for another assignment (e.g. your soundwalk assignment sounds)

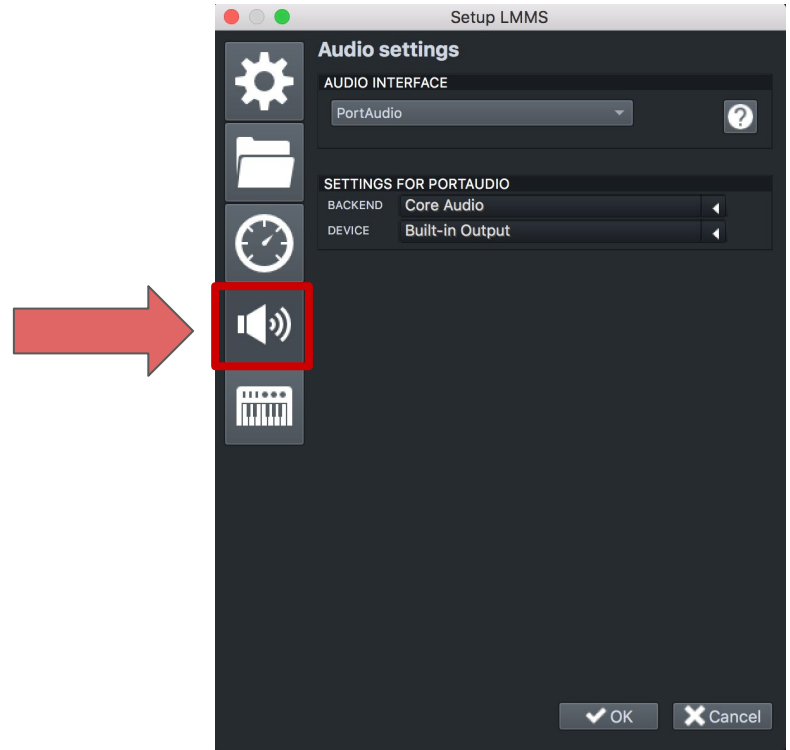
The following tool is optional

LMMS Installation

- Why LMMS (Linux MultiMedia Studio)? It's open source (i.e. free).
- Install it here: lmms.io/wiki/index.php?title=Main_Page
- What do you do if you have issues installing or using LMMS?
 1. Search the web to find answers in forums, etc.
 2. Check the LMMS documentation
 3. Hover over icons to see pop-up labels
 4. Ask the instructor, TAs, or other classmates for help
- Note that LMMS is actively supported

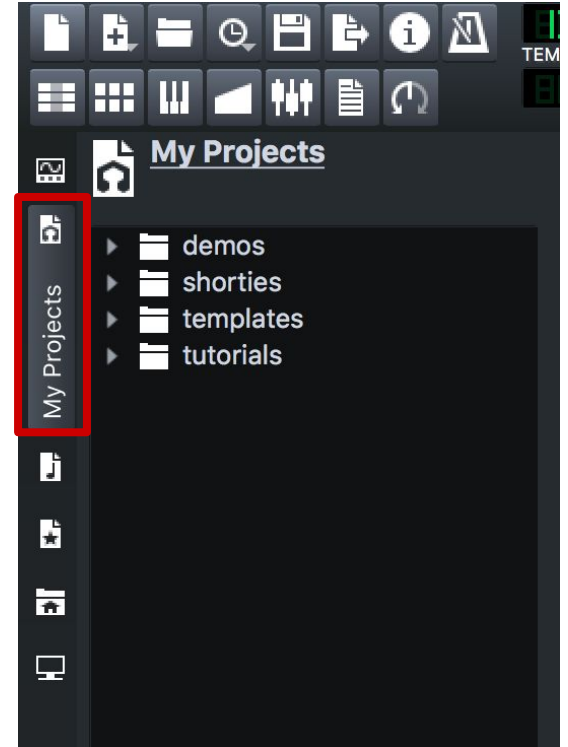
LMMS Overview

- Configure audio for Mac as shown at right (PC should be similar):
 - To open this setup window, go to LMMS-> Preferences-> Audio Settings
- Ask me for help if you have any issues configuring your audio



LMMS Overview

- Check out the demos:
 - Click on “My Projects” in left panel
 - Open “demos” folder



LMMS Overview

- Classic 8-bit Nintendo music examples:
 - a. Playlist: youtube.com/watch?v=NTa6Xbzfq1U&list=PL14A0FADA7F00DE1F&index=1
 - b. Instrumentation: youtube.com/watch?time_continue=15&v=la3coK5pg5w
- BitInvader
 - a. Go to “Instrument Plugins”-> BitInvader
 - b. Create 5 tracks each with a different waveform: sine, square, triangle, and noise
 - c. Command + Drag to copy/paste looped audio
 - d. Analyze the waveforms (time and frequency domain)
 - e. Turn volume of each track down so you don’t clip the audio
 - f. Make a simple composition



Questions