Intersections of Popular Musicianship and Computer Science

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What's the plan?

- Who am I?
- Hardware practices
- Software practices
- Potential implications and considerations
- Resources to learn more
- Discussion throughout

How to reach the resources

- Click here for a direct link
- www.JaredOLeary.com
  - Presentations
    - Intersections of Popular Musicianship and Computer Science

Who am I?

- All grades K-18+
- Experiences in education
  - Drumline/percussion, general music, large and small ensembles, music education, music technology, etc.
  - Coding, computer science, and makerspaces
- Director of Education & Research at BootUp PD
- Link to my CV

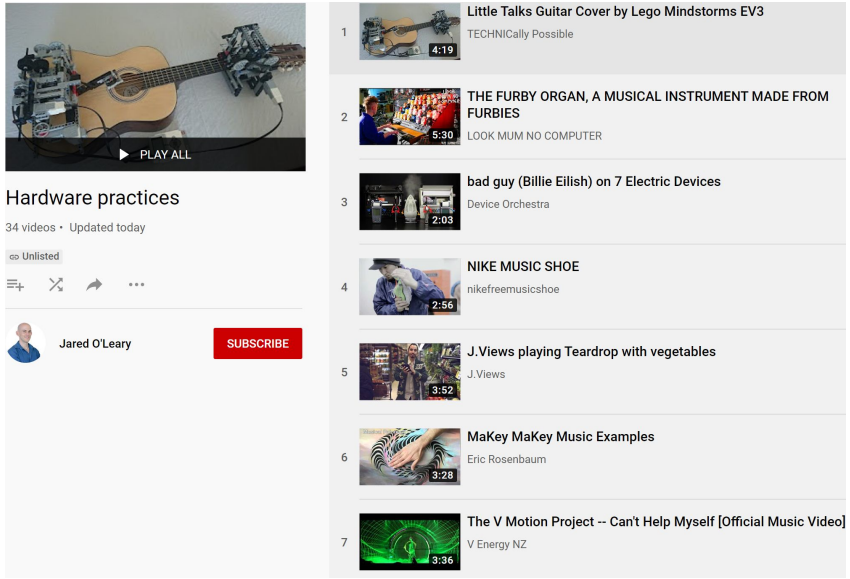
Hardware Practices

Some examples

- Circuit-bending sounds and music
- Modifying electronic hardware
  - Augmenting hardware
- Designing and building simple electronic devices
  - Or complex electronic devices
- More, visual examples of hardware modifications

Let’s explore some hardware practices

- YouTube playlist
- What CS practices and concepts are evident?
- What music-related practices and concepts are evident?



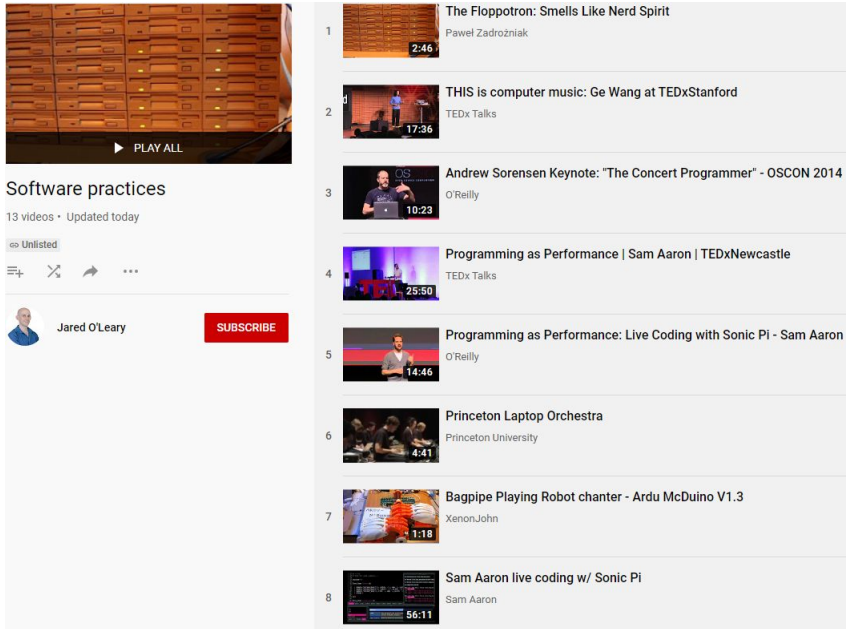
Software Practices

Some examples

- Creating and modifying retro music software
  - Using graphical programming languages
- Composing with code
  - Creating trap with code
- Performing with code

Let’s explore some software practices

- YouTube playlist
- Sonic Pi examples
- What CS practices and concepts are evident?
- What music-related practices and concepts are evident?



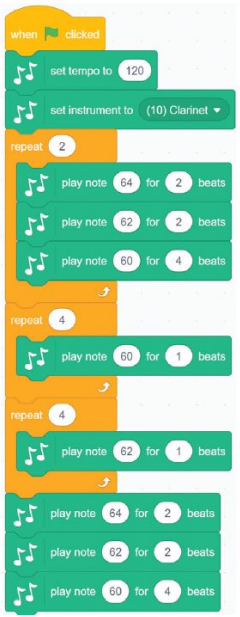
Potential Implications and Considerations

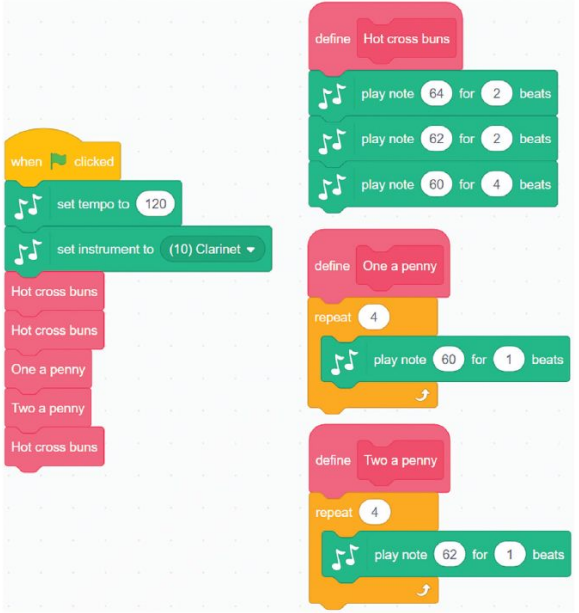
Interconnected practices

- Interconnected practices from my dissertation:
  - (a) Composition practices, (b) performance practices, (c) maker practices, (d) coding practices, (e) entrepreneurial practices, (f), visual art practices, and (g) community practices
- Another example of combined practices

General considerations

- Whose standards?
- Where does this fit in SAMR?
- New affordances comes with new constraints
- How much time for CS vs music making?





Considerations for working with music educators

- Consider SAMR in relation to music making
- Send them to me
- Start small
- Utilize your strengths
- Share what you're learning with kids

```
2.times do
  play :e, release: 2
  sleep 2
  play :d, release: 2
  sleep 2
  play :c, release: 4
  sleep 4
end

4.times do
  play :c
  sleep 1
end

4.times do
  play :d
  sleep 1
end

play :e, release: 2
sleep 2
play :d, release: 2
sleep 2
play :c, release: 4
sleep 4
```

Resources to Learn More

Pages on my website

- Music && Coding
  - Max/MSP
  - Scratch
  - Sonic Pi
  - Swift
- Presentations
- Publications

Free publications on this topic

- O'Leary, J. D. (2018). A corpus-assisted discourse analysis of music-related practices discussed within chipmusic.org. *Dissertation*.
- Benedict, C. & O'Leary, J. (2019). Reconceptualizing "music making:" Music technology and freedom in the age of neoliberalism. *Action, Criticism, and Theory for Music Education*, 18(1), 26-43.

Upcoming publications on this topic

- O’Leary, J. (July, 2020). Intersections of popular musicianship and computer science practices. *Journal of Popular Music Education*.
- O’Leary, J. (in press). Making music with circuit-bent children’s toys. *This book has not been announced.*
- O’Leary, J. (in press). Coding “Hip Hot Cross Buns” with Sonic Pi. *This book has not been announced*.

#CSK8 Podcast

- The #CSK8 Podcast explores research, experiences, and perspectives on computer science education with a focus on grades K-8.

What Ideas Can You Share?