

# Integrating CS & Music in K-8

[Jared O'Leary](#)

[BootUp PD](#)

*[Connect on different socials at JaredOLEary.com](http://JaredOLEary.com)*



# How to reach the resources

- [Click here for a direct link](#)
- www.JaredOLEary.com
  - Presentations
    - Integrating CS & Music in K-8



# Hardware practices



[YouTube playlist with more examples](#)



# Software practices



The image shows a screenshot of a C++ IDE with a dark theme. The main editor displays C++ code for a program using `std::atomic` and `std::lock_guard` to manage shared data in a multi-threaded environment. The code includes a `main` function that creates a `std::vector` and a `std::mutex`, and then spawns several threads to perform operations on the vector. A debugger window is open on the right side, showing the execution flow and the state of the program. The debugger window displays the current thread's execution path, including the `main` function and the `live_loop` function. The `live_loop` function is shown to be executing a loop that updates the `std::vector` elements. The debugger window also shows the state of the `std::vector` and the `std::mutex` object.

[YouTube playlist with more examples](#)



# 5 minutes exploring a playlist below

[Hardware examples](#)

[Software examples](#)

For each video you skim through, consider:

- What CS practices/concepts are evident?
- What music-related practices/concepts are evident?
- Whose standards are evident?
- Where does this fit in [SAMR](#)?
- What are the affordances/constraints for both CS & music?
- How much time will you spend in each domain?
- What if you don't have the expertise in both domains?



# Free music & CS projects for K-8

- K-2
  - [#9 Musical Instrument](#)
- 3+
  - [#13 Beatbox Machine](#)
  - [#14 What Can You Create? Music](#)
  - [#25 Music Player](#)
  - [Link to student-facing resources](#)



# Resources to learn more

- [CSK8 Podcast](#)
  - In this episode I unpack my (2020) publication titled “Intersections of popular musicianship and computer science practices,” which discusses potential implications of hardware and software practices that blur the boundaries between music making and computer science.
  - [Link to over 100 more episodes](#)
- [Music & Coding Resources](#)
- [Presentations](#)
- [Publications](#)

```
01000011 01010011 01001011 00111000 00100000
01010000 01101111 01100100 01100011 01100001
01110011 01110100 00100000 00100011 01000011
01010011 01001011 00111000 00100000 01010000
01101111 01100100 01100011 01100001 01110011
01110100 00100000 00100011 01000011 01010011
01001011 00111000 00100000 01010000 01101111
01100100 01100000 01100011 01110100
00100000 00100011 001011
00111000 01100100 000100
01100011 01100000 000000
00100011 00111000
00100000 00110001
01100101 01100101 00110011
01100011 01100000 01100011 01100011
01100011 01100011 01100011 01100011
01100100 01100011 01100001 01110011 01110100
00100000 00100011 01000011 01010011 01001011
00111000 00100000 01010000 01101111 01100100
01100011 01100001 01110011 01110100 00100000
00100011 01000011 01010011 01001011 00111000
00100000 01010000 01101111 01100100 01100011
01100001 01110011 01110100 00100000 00100011
```

**#CSK8**  
**Podcast**  
with  
**Jared O'Leary**



# Free publications

- 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.
- O'Leary, J. D. (2018). [A corpus-assisted discourse analysis of music-related practices discussed within chipmusic.org](#). *Dissertation*.





# More publications

- O'Leary, J. (2020). [Intersections of popular musicianship and computer science practices](#). *Journal of Popular Music Education*, 4(2), 153-174.
- O'Leary, J. (2020). [Making music with circuit-bent children's toys](#). In *Aligning Music to STEM: Theory and Practice for Middle School General Music*, edited by Frank Abrahams (pp. 203-208). Chicago: GIA Publications, Inc.
- O'Leary, J. (2020). [Hip Hot Cross Buns](#). In *The Music Technology Cookbook: Ready-Made Recipes for the Classroom*, edited by adam patrick bell (pp. 301-309). Oxford: Oxford University Press.
- O'Leary, J. (in press). Computer science & popular music education. This edited handbook has not yet been announced.



# What questions do you have?

- [Click here for a direct link](#)
- www.JaredOLEary.com
  - Presentations
    - Integrating CS & Music in K-8

