

Welcome to a GCDI Workshop!

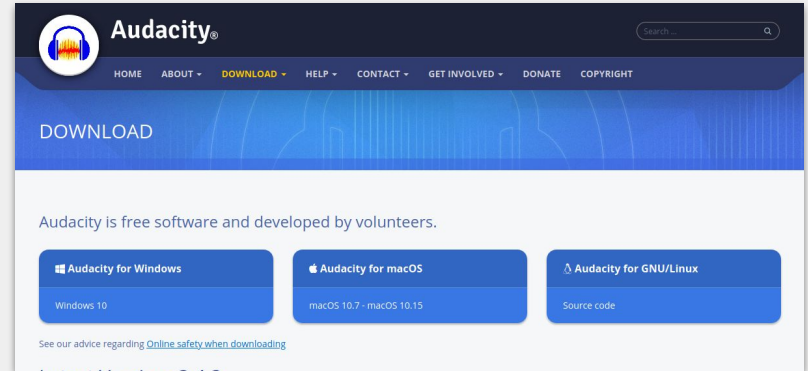
Basic Audio Editing with Audacity

Di Yoong



Before we begin

- ❑ [Audacity](#) installed?
- ❑ [Short audio clip](#) downloaded?
 - ❑ TRIAL_sample16bit0331.wav
 - ❑ TheFreeharmonicOrchestra_NoRobots.mp3



What is GCDI?

Graduate Center Digital Initiatives brings together the work of scholars and technologists at the CUNY Graduate Center to pioneer new modes of inquiry that integrate digital tools and methods into the research, teaching, and service missions of the university. We do so by fostering communities of creative and critical practice among students, faculty, and staff through programs, events, workshops, grant-funded projects, consultations, and more.

What is GCDI?

Led by GC Digital Fellows, we offer support for **digital scholarship** through

- Workshops
- Consultations
- Working Groups
- Online Resources

Time for introductions~!

Briefly, please share your:

Name,

Gender pronouns,

What brought you here today? (1-2 sentences)

Orientation of workshop

- Overview of digital audio recording
- Application time!
 - Processing and editing your interviews
- Check-out

Digital Audio Recording

Check your levels!



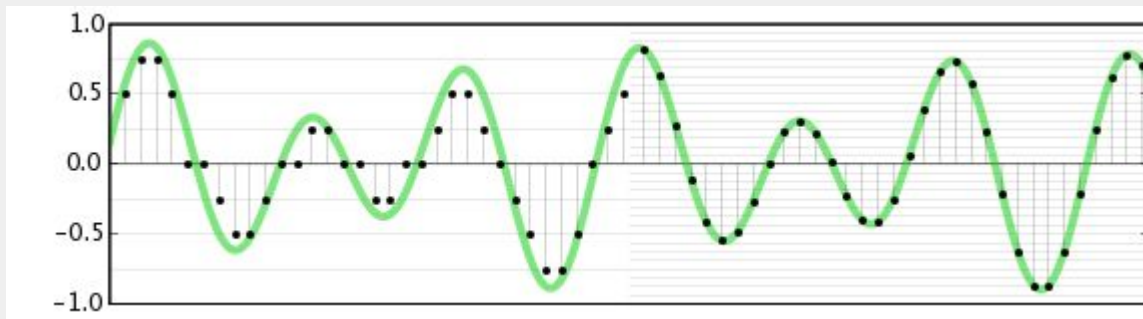
...but listen to your ears, not your eyes!

A note on file formats

- Uncompressed formats
 - WAV (loseless)
- Compressed formats
 - MP3 (lossy)
- Record and edit in an uncompressed format, (at least) 16-bit, & 44.1 kHz

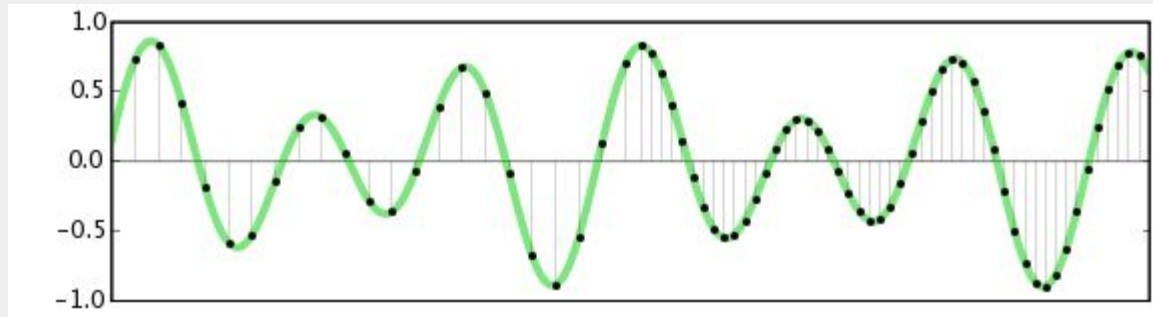
Digital audio quality

- Bits aka sample formats
 - The more bits used, the more precise the representation of each sample; increasing bits = increase max dynamic range
- Common sample formats and dynamic range:
 - 16-bit integer: 96 dB*
 - 24-bit integer: 145 dB
 - 32-bit floating point: near-infinite dB



Digital audio quality

- Hertz aka sample rates
 - Number of samples captured per second; Higher rates = higher audio frequencies represented
 - Human ear 20 Hz - 20,000 Hz; sample rate of 40,000 min if reproducing full range of audible sounds
- Common sample rates:
 - 44,100 Hz -- CD audio quality



Some data management considerations

- How are you planning to name your files? Anonymity concerns?
- What metadata is important to your audio file?
 - Archival vs. just for yourself
- What file format will you save your audio?
 - Will you be publishing your audio? How will it be distributed?
- Where will you be saving your audio?

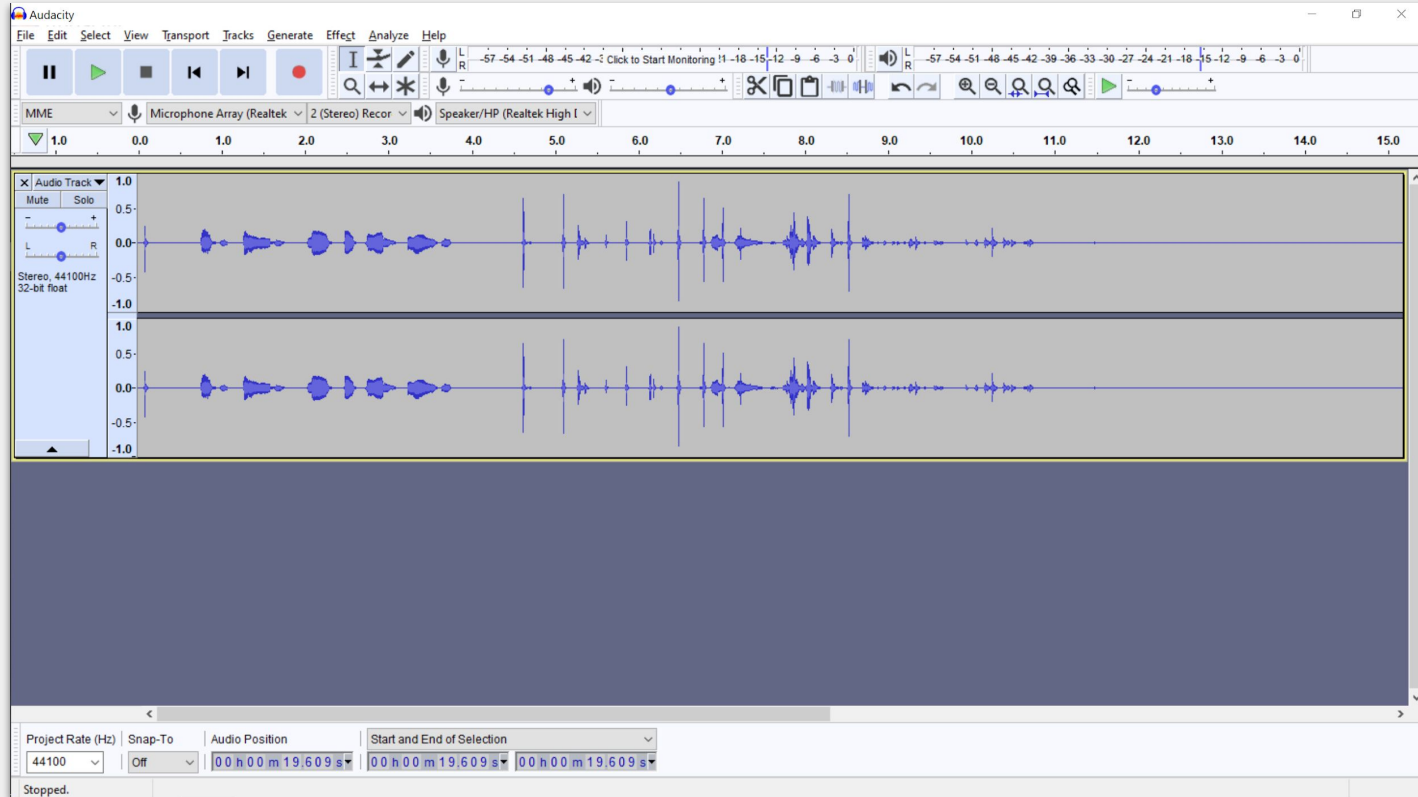
Using Audacity

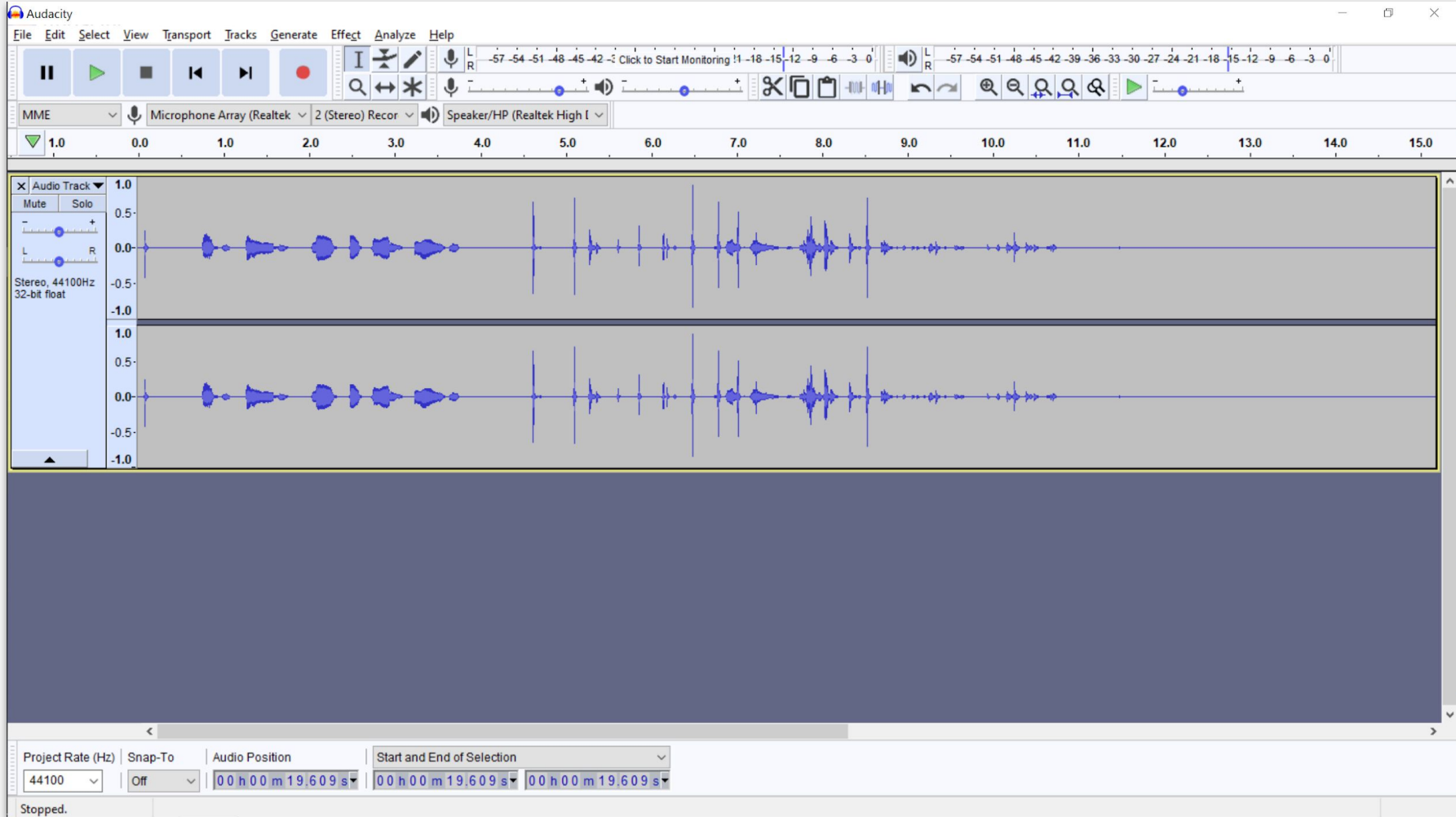
Audacity

- Free and open-source audio editing and recording software
- Works across different operating systems (Windows, Mac OS X, GNU/Linux)
 - Great for sharing project files
- Allows for many different audio file formats (compressed and uncompressed) and input modes (mono, stereo, multitracks)



Navigating Audacity





Loading your files

- You can open up an audio file directly in Audacity
 - File > Import > Audio
- **Always save a copy before editing;** avoid directly editing an original file
 - In case of corruption or other accidental edits (e.g. deleting a chunk of your interview) you can always return to your original recording
 - .aup is the Audacity project file format

Cleaning your recording

- Noise reduction
 - Be careful you don't end up eliminating part of your interview!
- Amplifying and Normalization
 - Beware of distortion!

* Note that applying an effect on a long recording will take a while; Audacity has a preview function (default = 6 secs)

Splitting tracks and joining clips

- Fade-in & out

Mastering your recording

- Check your overall levels
 - When you have multiple tracks in your project, the combined levels of your tracks can bring up the loudness of your final recording
 - If there are moments in your recording that is too loud, you will have to adjust individual tracks to accommodate the overall volume

Saving your output

- Metadata
 - You can create your own tags for your interview tracks
 - *Edit > Metadata > Add*
- Streaming v. archival purpose
- Naming formats

Use arrow keys (or ENTER key after editing) to navigate fields.

Tag	Value
Artist Name	Patsy Cline
Track Title	Walkin' After Midnight
Album Title	1973 Country Music Hall Of Fame
Track Number	1
Year	1957
Genre	Country
Comments	

Add Remove Clear

Genres: Edit... Reset...

Template: Load... Save... Set Default

☐ Don't show this when exporting audio

OK Cancel ?

Extra!

Recording (in Audacity)

- Create a new **stereo** track
 - Tracks > Add New > Stereo
- Pay attention to your **levels!**
 - Stay within -15 and -12dB
 - You can adjust your levels on Audacity via your track **Gain**
 - Remember to **playback** your recording
 - Check your recording before you begin in earnest!

Recording (in Audacity)

- Pause v. Stop
 - Pause: Pauses your recording on the current track
 - Stop: Ends the recording of the current track
- Record your room tone
 - Before you start recording proper, record 30 seconds of your room tone

Pay attention to...

- Where you are in relation to your microphone
 - 4-6 inches in front of your mic (off-axis) is ideal
- Plosives/P-pops
 - “Peter Piper picked a peck of pickled peppers”
- Sibilance
 - “And the silken sad uncertain rustling of each purple curtain”
- Mouth noises
 - Lip smacking, slurping
- Here's [a checklist!](#)

Background music and ambient sounds

- Using background music/ambient sounds
 - Creative Commons [licensing](#)
 - [How to use your CC music](#)
 - [Free Music Archive](#)

Creative Commons Licenses

Everything you need to know about...

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✓ **Why?**

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✓ **How?**

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Source: <https://creativecommons.org/licenses/>

WILEY

From Neubeiser, K. (2016), [Infographic: Everything you need to know about creative commons licenses](#), Wiley.

More resources

- [Getting Good \(Enough\) Audio Recording](#)
- NPR
 - [NPR: The ear training guide for audio producers](#)
 - [NPR: The producer's handbook to mixing audio stories](#)
- Audacity
 - [Radio.co: Audacity radio editing guide](#)
 - [Audacity tutorial](#)
 - [Audacity: Mixing a narration with background music](#)

Check-out

Sound Studies Working Group

Next meeting:

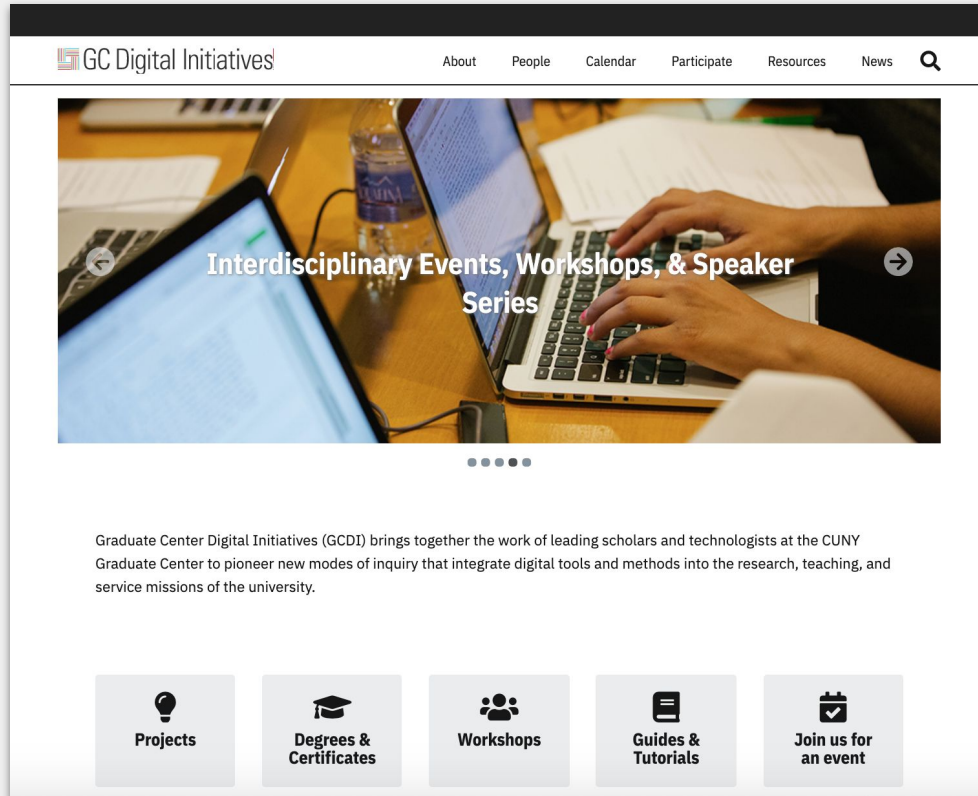
- April 19th (Mon)
 - Vote for a time!

Join us on [our commons group page](#) to receive latest notifications on future events!

Evaluations

<http://cuny.is/GCDI-webevals>

How can I get involved with GCDI?



The screenshot shows the homepage of the Graduate Center Digital Initiatives (GCDI) website. The header features the GCDI logo and a navigation menu with links: About, People, Calendar, Participate, Resources, News, and a search icon. The main content area is dominated by a large image of hands typing on a laptop, with the text "Interdisciplinary Events, Workshops, & Speaker Series" overlaid. Below this image is a row of five small dots, with the second dot from the left being filled, indicating the current slide in a carousel. A paragraph of text describes the GCDI's mission: "Graduate Center Digital Initiatives (GCDI) brings together the work of leading scholars and technologists at the CUNY Graduate Center to pioneer new modes of inquiry that integrate digital tools and methods into the research, teaching, and service missions of the university." At the bottom, there are five gray buttons with icons and text: "Projects" (lightbulb icon), "Degrees & Certificates" (graduation cap icon), "Workshops" (group of people icon), "Guides & Tutorials" (book icon), and "Join us for an event" (calendar icon with a checkmark).

GC Digital Initiatives

About People Calendar Participate Resources News

Interdisciplinary Events, Workshops, & Speaker Series

Graduate Center Digital Initiatives (GCDI) brings together the work of leading scholars and technologists at the CUNY Graduate Center to pioneer new modes of inquiry that integrate digital tools and methods into the research, teaching, and service missions of the university.

Projects

Degrees & Certificates

Workshops

Guides & Tutorials

Join us for an event

How can I get involved with GCDI?

The screenshot shows the CUNY Academic Commons interface. At the top, the logo "CUNY ACADEMIC COMMONS" is displayed in three colored boxes (orange, blue, green). To the right is a search bar with "Google Custom Search" and a "Search" button. Below the logo is a navigation bar with links: People, Groups, Sites, Papers, Courses, Events, News, and About. The "Groups" link is highlighted.

On the left side, there is a sidebar for the "GC Digital Initiatives at the CUNY Graduate Center" group. It includes a group icon, a "Home" button, and a list of links: Forum, Events, Papers, Files, and Docs. At the bottom of the sidebar, it shows "Members 190".

The main content area features the group title "GC Digital Initiatives at the CUNY Graduate Center" and a group icon. Below the title, it says "Public Group" and "active 3 days ago". A description follows: "This group accompanies the the GCDI website (<http://gcdi.commons.gc.cuny.edu/>). Here, members of the GC community can share news of recent events and new projects and can begin to build connections between projects." A "Quick Link" is provided: <http://cuny.is/group-gcdi>.

On the right side of the main content area, there is a "Group Admins" section with two profile pictures.

Below the description, there is a "Recent group activity" section. It includes an "RSS" link and a "No Filter" dropdown menu. The activity list shows a post by "Inés Vafío García" who started the topic "CFP – Special Issue – Journal of Interactive Technology and Pedagogy (11/30/19) in the forum" 3 days ago. Below this, there is a link to "Digital Initiatives at the CUNY Graduate Center 3 days ago".

At the bottom of the activity list, there is a section titled "The Journal of Interactive Technology and Pedagogy" with a subheading "Special Issue:".