School of Machines
MAKING & MAKE- BELIEVE

# MAKING SOUND-PLACES ZINE

# Hello World!

## Welcome to the Making Sound-Places zine!

As the oligarchs take over the world we are actively looking for opportunities to spend less time on the tech bro platforms and instead find reasons to invite people to join us in our own spaces online. This is our fourth attempt to create a zine dedicated to one online class, this one focused on Making Sound-Places, our latest five-week course set to begin next week.

Honestly, I am so impressed by the content of this course. The references are all fascinating composers, and musicians, each a pioneer in their own right, really.  That said, this zine has lots of treats to offer, too. An interview with Jakub Fiala, instructor for the upcoming course, who shares some insights into why he created it. Plus, many references and links to just some of the cool and inspiring people we'll be covering in these upcoming weeks!

Jakub's own work is brilliant. Check out his sewing machine compositions (pg.11) and his project, 'Finding Gustavo', (link, pg.4) a brilliant web audio project that inevitably became the motivation for this course.

Jakub would like to take us on a sound journey, sharing all that he's learned over the years, generously offering up the opportunity for us to see and experience the world differently, so that we can create rich and powerful stories, and share our worlds with others. Come join us!

In Solidarity,

Rachel Uwa,

# Jakub Fiala

## Artist, Creative Technologist

Jakub Fiala is a Berlin-based artist and creative technologist, specialising in algorithmic, sonic and interactive art. He particularly enjoys misusing technology to unveil the Realm of the Weird; exposing the machines' delicate innards and making them tell human stories.

**fiala.space**

# INTERVIEW WITH JAKUB FIALA

**What is your background? How did you get interested in the topic of sound and sound places?**

I've been playing music since I was 7 - first I studied classical guitar, then jazz and free improvisation. In my teenage years I learned to program and became obsessed with computer games, spending hundreds of hours in digital worlds. I think my breakthrough was when I bought a second-hand Zoom recorder and discovered the joy of listening to soundscapes.

Listening to the world through a stereo microphone can be profoundly revealing: sounds which our ears tend to filter out are suddenly clear and present; sounds which occupy and distract us are placed back into the bubbling sonic stew. I started making field recordings and using them in my music, which taught me to appreciate the diversity and sheer richness of what can be heard.

**Where did the idea for the course come from?**

The idea for the course came from my work on an online game called Finding Gustavo, where I augmented Google Street View with custom soundscapes and spatialised sound objects. I realised there was a lot to crafting such sound experiences and wanted to share and learn together with other artists.

INTERVIEW CON'T

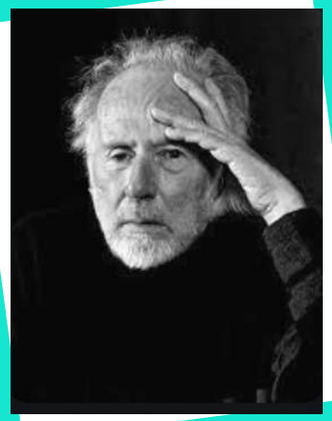
**How can sound allow us to create a sense of place in a digital world in your opinion and what most excites you about that?**

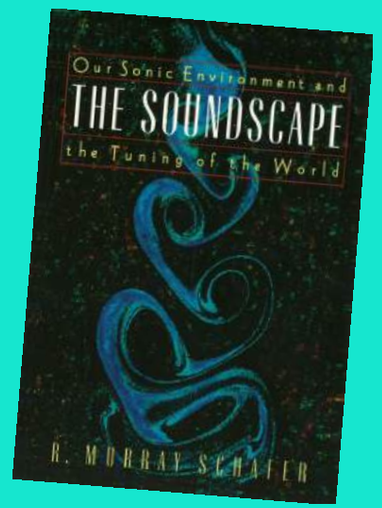
I think humans deeply desire a sense of place, of groundedness and embedding. But our digital culture is too obsessed with images. Visuals are easily consumed and commodified, and lend themselves to extractive capitalist models of interaction. Think about a tiktok feed - while we scroll past rapidly changing images, sounds are brutally cut off, squeezed into the first 3 seconds to capture attention and blasting from small phone speakers. We are not given time to breathe, think, listen, we are transported from place to place without context or a narrative thread.

Media that center sound can be different. Because a sound's meaning unfolds with time, it forces us to slow down. While our gaze can only look in one direction, we can hear many, many things simultaneously. Certain soundscapes carry deep meaning for our bodies and communities - think about the sound of a forest, wind on a pasture with sheep bells ringing, the sizzling of the soup on a grandmother's stove. Centering sound in our digital experience can help us escape the adverts and algorithms, see past the brain fog and connect to one another.

FEATURED ARTISTS IN THIS COURSE

**In your course breakdown you mention the plan to share works of composers R. Murray Schafer and Daphne Oram. What is it about their work that stands out to you and that you want to share with others?**



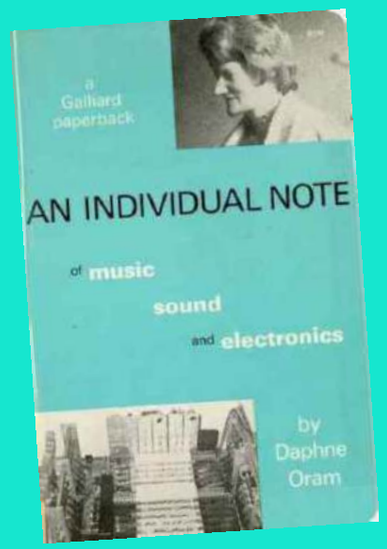



**R. Murray Schafer**'s book *The Soundscape* is a defining work in the field of acoustic ecology. The way Schafer describes sonic environments is really captivating - I still remember reading the first chapters on a quiet day in London years ago, having an almost religious experience becoming deeply aware of my surrounding soundscape.

Schafer developed an impressive toolkit of methods and exercises for analysing and designing soundscapes, which is a great starting point for my course.

INTERVIEW CON'T

**Daphne Oram** is one of the key composers of early electronic music - I mean, the woman was putting on turntablism shows in the 1940s! I'm taking inspiration from her book *An Individual Note of Music, Sound and Electronics,* where she explains the fundamentals of music through a playful account of impatient electrons charging capacitors, rather than through rigid music theory. She shows how natural phenomena such as electricity have something inherently musical and poetic to them. I think it's a wonderful way to get into sound synthesis for folks who wish to go beyond the mainstream conception of music.




FEATURED ARTISTS IN THIS COURSE

**What other sources or artworks does the course draw from?**

INTERVIEW CON'T

I got much inspiration from **Pauline Oliveros**' *Deep Listening* practice, which uses audition not as a passive sense, but rather an active meditation technique. The challenge to "listen in every possible way to everything possible to hear no matter what you are doing" centers our sonic experience in an extraordinary way.


CLICK TO GO LISTEN TO THESE COMPOSERS

## R. Murray Schafer


The Musical Mind #2,
R. Murray Schafer Composer

## Daphne Oram


BBC Archive video of Daphne Oram

## Pauline Oliveros

Wow, great trailer for film titled:
Deep Listening the Story of Pauline Oliveros

FEATURED ARTISTS IN THIS COURSE

**What other sources or artworks does the course draw from?**

For the class titled GRAINS-TEXTURES I want to draw from the music of BIPOC artists such as **J Dilla**, Flying Lotus and Maria Chavez.

INTERVIEW CON'T

## J Dilla

Mini-documentary, Understanding J Dilla: The Soul of Hip Hop

## Flying Lotus


Flying Lotus Breaks Down His Song "More"

## Maria Chavez

Turntablist Maria Chavez - The Language of Chance #1(live @LGW2018)

Extra: interview with Maria Chavez, click here!!!

In sound art/sound design discourse, the narrative around field recording and sampling often revolves around white musique concréte composers; I'd like to try a different approach by focusing on underground musicians and BIPOC artists in particular.

INTERVIEW CON'T

**Why choose Web technologies for making sound-places?**

I first chose JavaScript and Web Audio because they're technologies I'm already very familiar with and many other folks are, too. However, I think there's something interesting in focusing on the soundscape of the Web, which is, as Schafer would say, rather impoverished.

At the same time, the Web is the most accessible platform for digital experiences, and "web places" can easily become social places.

Why not make them sound-places, too?

INTERVIEW CON'T

**Can you clarify a bit what people will learn to do in this class?**

The class involves a real mishmash of tools and techniques, but the ultimate goal is to understand the basics of programming digital sound and use this to create spatial sound experiences. Building a meditative computer game? Setting up an immersive art installation? Or perhaps you have a story to tell through sound... by designing an appealing, meaningful soundscape, we can create a sense of place in and around our art.

**Also, if people are a bit afraid they don't have enough background knowledge, can you clarify this and give some hope?! :)**

The class does involve programming in some of the sessions, but when it does, there will be pre-made code snippets you can start with, instead of having to write everything from scratch. Usually we'll just be tweaking some number values and wiring up sound components, a bit like playing around with a synthesizer.

I've also tried to avoid music theory and computer science - we'll approach the topic first as Listeners, then as Designers; with a pair of fresh ears and a social/ecological lens. More than anything, I'm hoping we'll end up talking, listening to and learning from each other!

INTERVIEW END

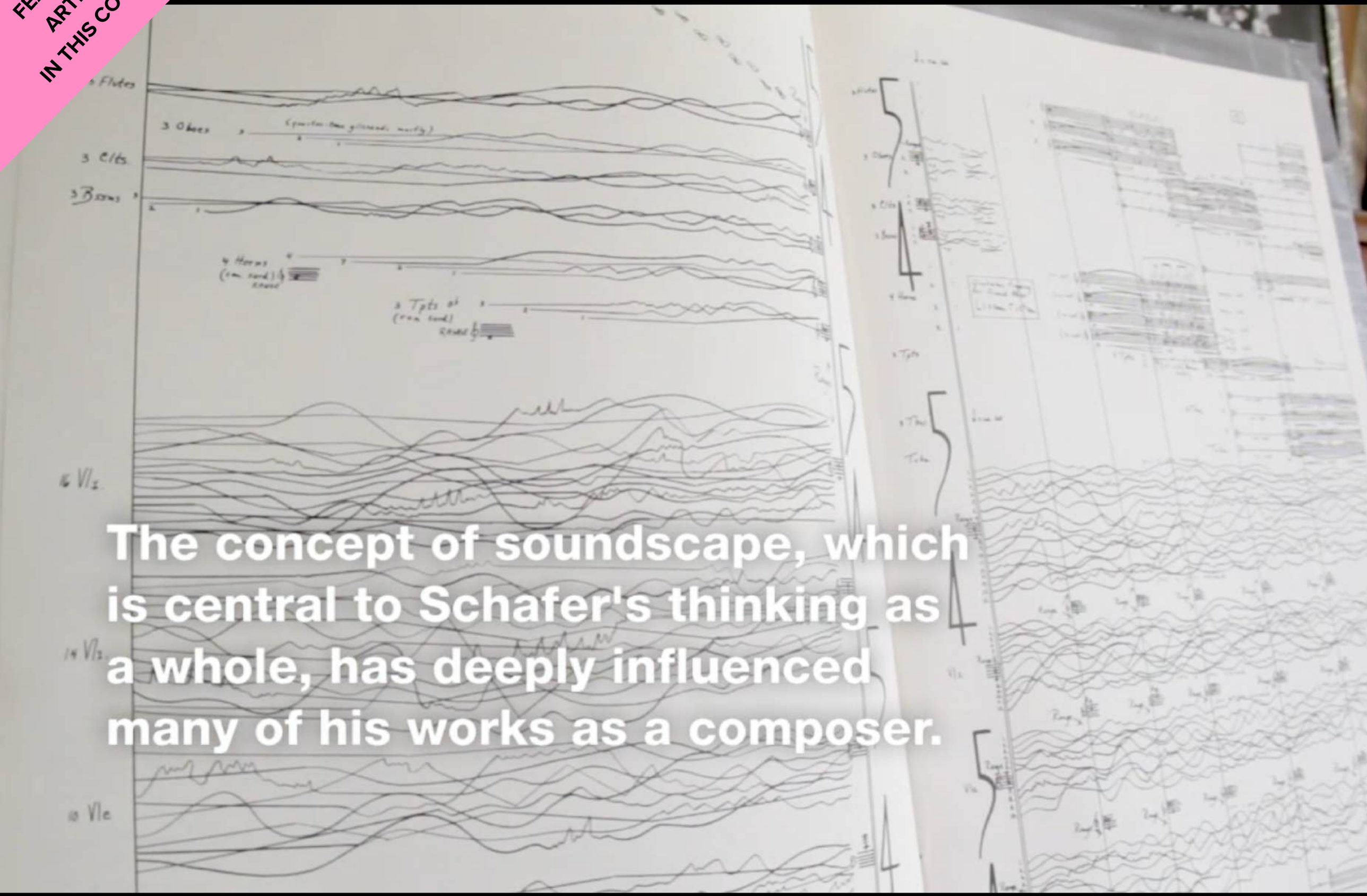

This is a composition in three parts commissioned by performance artist Ana Mendes for her performance 'Map Series'.

In 'Map Series', Ana explores the violent heritage of colonialism, using a sewing machine to stitch across maps of Portuguese colonial holdings, representing the wounds inflicted on subjected peoples. The performance is accompanied by this 30 min composition created entirely from recordings of various sewing machines.

released September 9, 2018

Concept – Ana Mendes
Recording & Composition – Jakub Fiala
Recording assistance – Pietro Librizzi

FEATURED ARTISTS IN THIS COURSE



The concept of soundscape, which is central to Schafer's thinking as a whole, has deeply influenced many of his works as a composer.

FEATURED ARTISTS IN THIS COURSE

For me Deep Listening is a life long practice. The more I listen the more I learn to listen. Deep Listening involves going below the surface of what is heard, expanding to the whole field of sound while finding focus. This is the way to connect with the acoustic environment, all that inhabits it and all that there is.

- Pauline Oliveros

deep listening the story of pauline oliveros official trailer 2 Original

"PLAY IS THE GREATEST RESEARCH TOOL THAT THE HUMAN RACE HAS."

—Pauline Oliveros 3/19/80

0:54 / 2:42

**WORD FIND!** Find 30+ *Making Sound-Places* related words.

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Email us if you get all of them. :)

Online course

# Making Sound-Places

- **19. March - 16. April**
- **Online!**
- **Five-weeks, Wednesdays, 6-8PM CET**
- **Small class of participants**
- **Instructor Jacub Fiala**

## COURSE DESCRIPTION

Hearing is considered our second most important sense, but the role of sound in shaping our experience of the world is often overlooked. Sound has the uncanny power to radically reframe our other sensations and embed them within spacetime. This makes sound one of the most effective tools for creating a sense of place in physical and digital worlds. Technologies such as headphones along with the Web have transformed the way we perceive our sonic environment. We already live in an augmented sonic reality for much of our waking life. As creatives, artist and designers, we can use sound to construct new sensed places - Sound-Places - accessible from all over the world with only a browser and an internet connection.

This class gives us a set of tools for sonic place-making on the Web. We begin, as sound practitioners always should, by listening. We investigate the sound-places we inhabit using R. Murray Schafer's idea of the Soundscape. We then learn about the basic elements of sound, skipping over the rigour of Western music theory through Daphne Oram's idiosyncratic approach. Once we are able to synthesize sound, we learn about how computers capture, store and play back audio, drawing from sampling approaches with focus on BIPOC artists. We take our sonic toolkit into 3D and learn about composing for places. Finally, we connect our Sound-Places over the Network, learning about digital sound as a tool for shared experiences.

By the end of the course, we will have grasped the fundamentals of analogue and digital sound, learned to program using JavaScript, Web Audio and WebSockets and explored a variety of ideas from music, engineering and ecology. We'll have had an intimate encounter with our sonic environments and discovered tools for creating Sound-Places within digital worlds. We will have created three sound art pieces on the Web, and a collaborative networked composition.

## IN THIS COURSE YOU WILL BE INTRODUCED TO

- Acoustic ecology
- Sound synthesis
- Sampling
- Field recording
- JavaScript
- Web Audio
- WebSockets

## WHO IS THIS COURSE FOR?

Creative folks who want to build digital places, programmers who want to use code to make sound, musicians interested in (non-musical) soundscapes, sound artists keen to work with web technologies. Prior programming experience is helpful but not strictly required. Code examples and 1-on-1 help will be provided if you are struggling with the programming parts.

## FOR MORE INFO AND TO REGISTER, CLICK HERE.

# Making Sound-Places Course Outline

**Week 1: Waves-Spaces**

We'll begin by getting to know each other and thinking about how sound shapes our experience of place. We'll learn about composer R. Murray Schafer's ideas from his book 'The Soundscape: Our Sonic Environment and the Tuning of the World'. Equipped with Schafer's concepts, we'll listen & analyse the soundscapes we find ourselves in. By sharing our descriptions, we'll discover the diverse ways we describe our sonic experience.

**Week 2: Tension-Release**

We'll unpack the fundamentals of sound through Daphne Oram's ideas from her book 'An Individual Note of Music, Sound and Electronics'. We'll learn what it means to *synthesize* sound. Then we'll begin exploring audio on the Web using the *Tone.js* JavaScript library. We'll learn about oscillators, modulation, envelopes, delay lines and sequencing. By the end of the session, we'll be able to create a simple ambient music piece in the vein of Brian Eno's "Music for Airports".

**Week 3: Grain-Textures**

We'll investigate how computers record, store and play back sound. We'll discuss sampling and field recording as creative techniques, taking inspiration from sampling culture with particular focus on POC artists. We'll expand our creative toolkit, learning how to gather samples on Freesound.org, load audio recordings on the Web and mix layers of sounds together to achieve a pleasant & interesting result. By the end of the session, we'll be able to compose a brief sonic story using found sounds.

**Week 4: Distances-Directions**

In this session we'll explore the basics of spatial audio - from mono through stereo, to simulating three-dimensional sound with standard headphones. We'll learn how we perceive space through sound and how we can draw "sonic images" with Web Audio tools. We'll discuss the challenges of composing for a place, using examples from games and film. At the end, we will use a custom web-based tool called Sharawadji to design a Sound-Place within Google Street View.

**Week 5: Signals-Connections**

In the last session, we'll take our learnings onto the Network and discover how to make Sound-Places interactive and connected. We'll learn to capture sound from our computer's microphone, analyse it in real-time and use it to send and receive signals from other computers over WebSockets. We'll link up our local Sound-Places to create one big interconnected Place together.

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