Rift Riffs

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CART 451

What is your theme/topic/goal/issue to be tackled - why is it important to you?

Our project delves into the heart of collaborative music-making, emphasizing its profound capacity to unite individuals from disparate backgrounds and locales. Music, in its essence, transcends boundaries—cultural, geographic, or personal. It is this universality and binding power of music that captivates us. In today's fast-paced world, interactions, especially spontaneous ones between strangers, have become increasingly fleeting. Yet, these transient moments often leave a profound mark, enriching our daily narratives.

We envision Rift Riffs as an installation nexus of sorts, momentarily intertwining the lives of two strangers from distinct locations through the medium of music orchestrated through movement. It's not merely about sound; it's about forging connections, and crafting shared memories—celebrating serendipitous moments of everyday interaction. We hope that, as participants move on, they carry forward not just the rhythm or the tune but the resonance of a shared experience. Through this installation, we aspire to remind people of the beauty of brief yet meaningful interactions and the melodies they can birth.

What form will your project evolve into - who is your audience?

Rift Riffs will manifest as an immersive musical installation, designed as an intersection of art, technology, and human connection. There will be multiple cameras with corresponding screens displaying other users as a portal of sorts. Depending on the different positions users stand, different sounds will play. For example, if one raises their hands a drum loop could play while the other kicking their feet may play a piano. The more users that join, the more complex the harmonies will be

At the core, we'd like to engage with any strangers who pass—individuals unacquainted with each other but united by a shared moment within our installation. We also believe that specific kinds of people will gravitate more towards the project. For one, music pioneers; those with an ear for the avant-garde and a love for the communal co-creative aspects of music as an art. Another is technology enthusiasts; people not just engrossed by the melodies birthed, but rather the intricate dance of software and hardware facilitating these unexpected duets. In essence, our installation beckons to anyone with a curiosity for new experiences, a love for music, and an appreciation for the marvels of modern technology.

Discuss how each of the two readings listed above has inspired/motivated your current choices with regard to the project.

Our portal project, rooted in the combination of technology, music, and human connectivity, is not just a representation of interactivity but also a manifestation of today's data-driven society. The considerations around data collection, as outlined by Mimi Onuoha in "The Point of Collection," are paralleled by the discussions in "A Sea of Data: Apophenia and Pattern (Mis-)Recognition." These narratives emphasize the role of perception, patterns, and our inherent desire to derive meaning from chaos.

> Nature of Data Collection and Pattern Recognition: As participants interact within our portal and contribute to the musical database, we tread the delicate line between genuine pattern recognition and apophenia - the tendency to perceive connections between unrelated things. The chosen music samples, synthesizers, chords, and notes shape the data, reflecting Onuoha's argument that data sets are products of their collection methods.
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> The Patternization of Data and Apophenia: Our installation's accumulation of musical interactions can veer towards favoring familiar patterns, reflecting society's tendencies highlighted by Onuoha. Yet, as the "A Sea of Data" article suggests, in this vast sea of musical data, we must remain cognizant of the difference between genuine patterns and false perceptions.
>
> Data's Multifaceted Revelations: The music created in our portals is a reflection of human interactions, preferences, and perhaps even unconscious biases. Just as data

can offer deductions about individual behaviors or inclinations, our musical data might serve as a mirror, reflecting societal norms, biases, or even misrecognitions.

Data Collection as a Transaction and its Implications: The human-centric ethos of our project is juxtaposed against the backdrop of a digitized world where data is increasingly abstracted from its human origin. As "A Sea of Data" highlights, in our quest to decode patterns and meanings, we might inadvertently drift towards apophenia. In our portal, this translates to the potential of misconstruing musical patterns or imposing unwarranted meanings on random collaborations.

Ethical Considerations: As we navigate the confluence of art, technology, and data ethics, insights from both articles serve as guiding beacons. They remind us of the responsibility that accompanies data collection and interpretation, emphasizing the need for a balanced approach that respects human agency and avoids the pitfalls of apophenia.

In synthesizing these discussions, our portal project emerges as more than just an artistic endeavor. It stands as a testament to the complexities of data, pattern recognition, human interaction, and the ethical considerations they entail in the modern era.

What medium(s) do you intend to use and why?

We plan to make our project a combination of video installation, sound design, and real-time graphics. Primarily harnessing the capabilities of projectors, cameras, and speakers complemented by real-time visuals and multi-layered audio. Our choice of these mediums is driven by a desire to create a multi-sensory experience that is both immersive and fun. The various mediums play a back-and-forth of sorts, with the cameras capturing spontaneous movements while converting them to sound, and the projectors displaying said sound and visuals on large-scale display for the other users. The combination of these mediums allows participants to fully engage and be enveloped in the unfolding musical narrative, enhancing the installation's depth and dimensions while ensuring a seamless melding of human interaction, music, and technology.

What is your data: where will you get it, will it be collected - how and why?

For our project, we are planning to create our own data sets via the curation of musical elements from all throughout the web; including samples, synthesizers, chords, and individual notes. The samples will be organized into 4 categories: drums, bass, guitar, and piano; where participants will be assigned a set of sounds at random, ensuring that no two experiences are identical. This goal will be achieved, by configuring the camera with the POSEnet API to convert movements to code, which will in turn be sent to the other users via web sockets and finally presented as musical outputs.

It's worth noting that our emphasis isn't solely on the final musical product, but rather the experience as a whole—the spontaneity and authenticity of the creation process itself. Every sound generated, be it harmonious or discordant, symbolizes the unscripted nature of human connection. In this light, the journey of sound generation becomes as profound as the end auditory result, underscoring the uniqueness of each individual's experience.

At a very high level : what are the algorithm(s) that will be used and implemented to achieve your intentions?

Randomization & Sequencing Algorithms:
To ensure that each interaction is distinct, we'll also incorporate randomization logic. This algorithm will select different samples from our database, assigning them to participants at random. This guarantees that the musical outcome of each interaction remains unpredictable and fresh.

Harmonization Algorithms:
While we appreciate the spontaneous nature of sound generation, we also plan to implement an underlying harmonization algorithm to ensure the music actually comes out sounding like music. The entire project will take the form of a single musical key at a time, not allowing users to play notes that make the project sound overly dissonant or confusing.

POSEnet Algorithms:
These are responsible for interpreting participants' movements. Using cameras, the algorithm will capture and quantify the spatial and temporal aspects of motion. For instance, rapid movements might be translated to higher tempos or pitches, while slower, more expansive gestures could correspond to more fluid atmospheric soundscapes.

Similar Projects

Very Nervous System
http://www.davidrokeby.com/vns.html

"Very Nervous System" is an interactive sound installation created in 1982, the program uses video cameras, image processors, computers, synthesizers, as well as a sound system to create a space in which the movements of one's body equate to music and sound. The project has been installed in many galleries over the years, as well as public outdoor spaces. Rift Riffs takes heavy inspiration from the generative and musical aspects of this project, while also expanding on the concepts in a more contemporary manner fit with screens and live video.

Portals
https://portals.org/

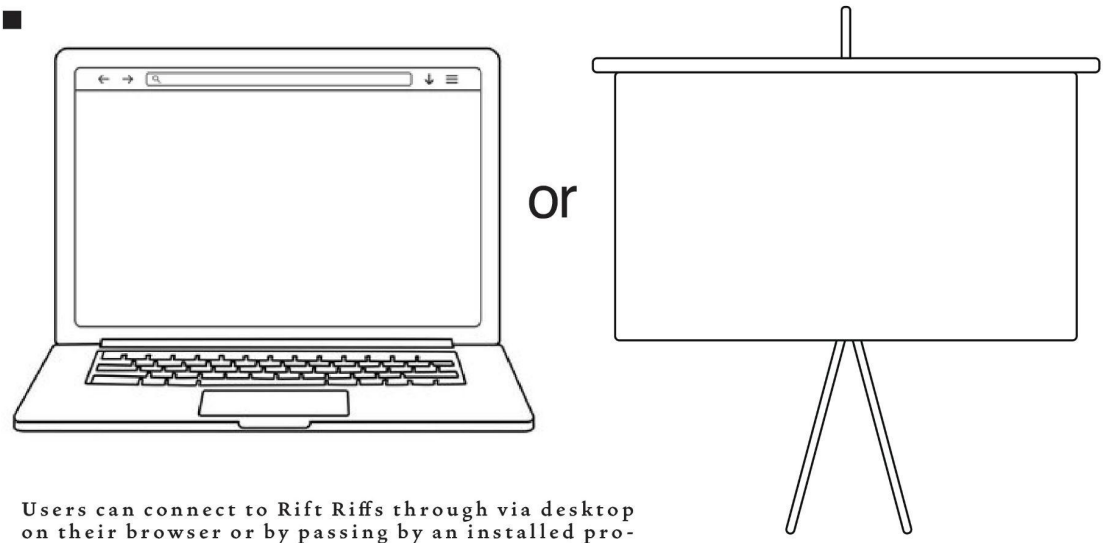
Among the many contemporary art installations we could've drawn inspiration from, "Portals" stands out as a notable benchmark, deeply resonating with our project's collaborative ethos. The project itself contains many portals situated worldwide with 24/7 live feed of another portal via displays and cameras. Functioning as a window of sorts into another way of life. Drawing inspiration from this pioneering initiative, we seek to build upon this foundation, introducing new layers of interaction, amplifying the essence of shared experiences, and celebrating the magic of momentary global connections.

My Singing Monsters
https://www.bigbluebubble.com/home/games/my-singing-monsters-series/my-singing-monsters/

"My Singing Monsters" is a popular mobile game developed by Big Blue Bubble. The game revolves around the concept of creating and managing an island inhabited by musical monsters. Players are tasked with breeding, collecting, and organizing these monsters to produce melodious tunes. The game has hundreds of distinct monsters allowing players to intuitively weave evolving melodies, rhythms, and harmonies. It's this magic of producing music from unexpected sources, that we want to harness in Rift Riffs. Just like the game, our project will have no fixed rules or prescribed outcomes, users are free to trust their instincts, take risks, and just mess around; providing a break from the overly serious and monotonous life.

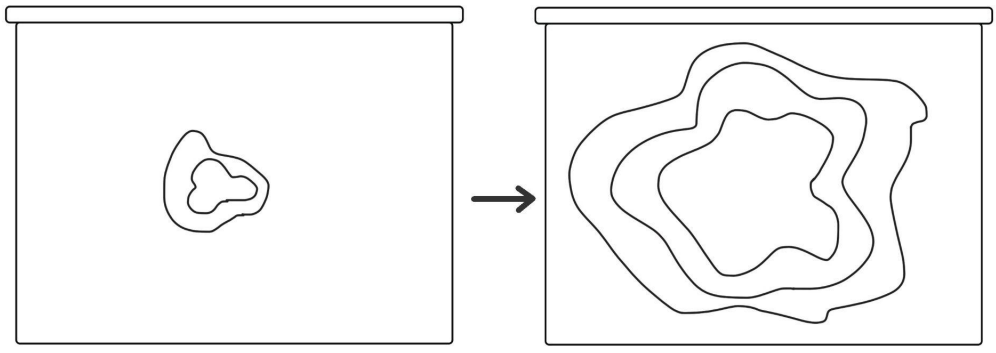
Visual Story Board

1.



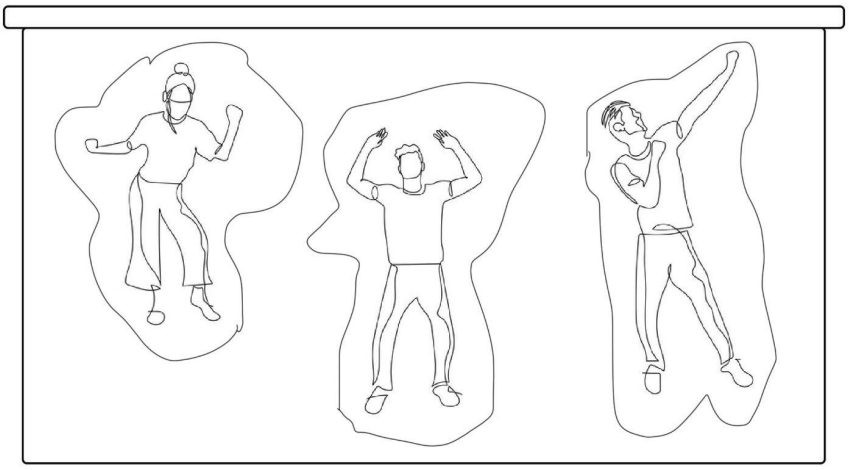
Users can connect to Rift Riffs through via desktop on their browser or by passing by an installed projector. Upon connecting, a random instrument is chosen with a corresponding colour.

2.



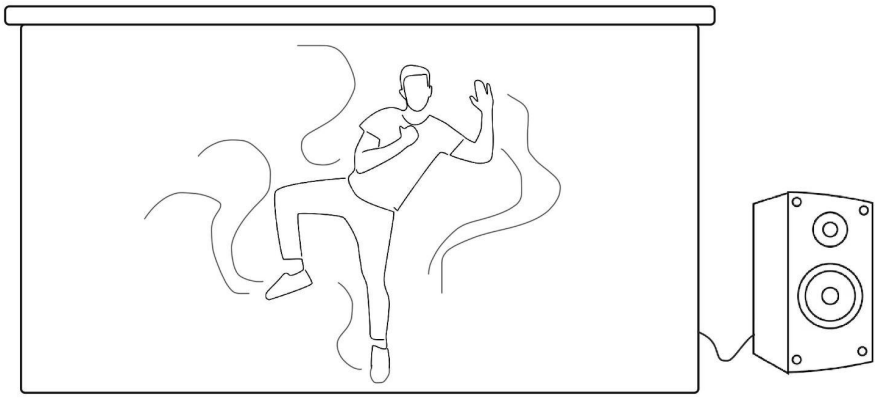
One connected, a closed rift appears, waiting until a person walks in front of the camera. Once they enter, the rift opens, playing a single note of the randomly chosen instrument.

3.



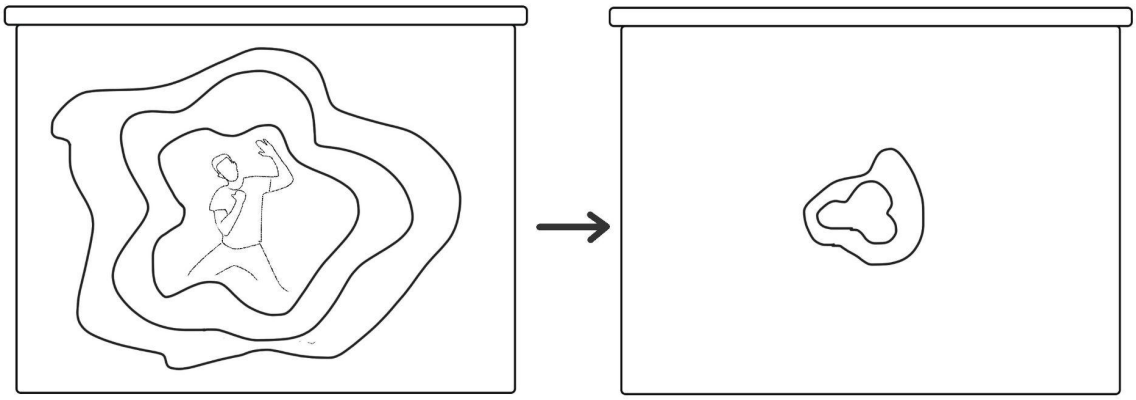
Users are shown rifts with generative outlines to everyone else connected. each person has a different colour corresponding to the instrument they're respresenting.

4.



Different movements intuitively create different notes to be played for everyone else connected. Movements have trailing effects to correspond with note length and velocity. Sounds are either played through the desktops speakers or the connect speakers of the projector The musics tempo is based off of an average of everyones movement speed.

5.



When a user walks away from the project, the rift is animated to look as if it is closing with their music slowly fading away. The rift stays in the small "closed" state, like in image 2 until another person walks in front of the camera, reopening the rift, resuming music.