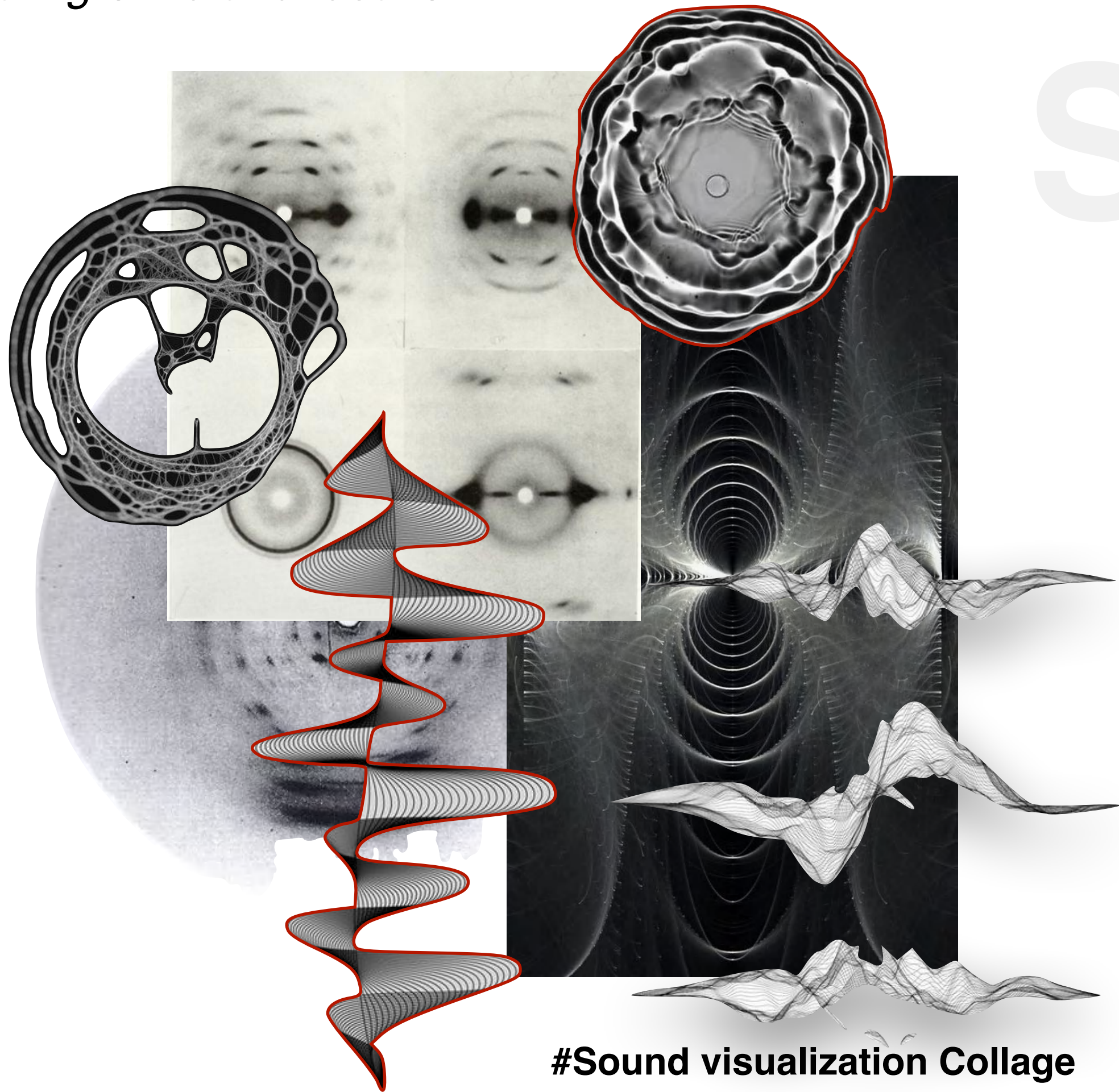


Sound Visualization Project

Background and Ideation



The commonality between music and art lies in their organic blend of abstraction and concreteness, interacting through the five senses and intuition. In music visualization, the audio from different instruments and sounds serves as a key element, while in visual art, it's the audio and dynamic visual experiments that come into play. After experimenting with different instruments, I ultimately chose the drum kit, which I practiced the longest, as the focus for my visual expression.

Sonic Visions



#Chinese Ukulele

The Chinese Xiao Si Xian is a traditional four-stringed plucked instrument, widely used in Chinese folk music and opera accompaniment, particularly popular in northern China. It is compact in size with a bright, crisp tone, and is often used to express lively, cheerful melodies.

Link to Practice Video:

<https://youtu.be/d9zhyAubkCY>



#Drum Kit

The drum kit offers a highly diverse range of audio expressions and is one of the instruments with the most rhythmic variations, featuring rich transitions between low, mid, and high frequencies. Through different forms of practice, I seek inspiration for music visualization.

Link to Practice Video:

<https://youtu.be/TPTKMgcNFDm>

Sound Visualization Project

Music Experimenting



#Part 01 - Fast and Slow Rhythm Experiment

By contrasting fast and slow tempos, we can translate different music speeds into visual effects. Fast tempos create rapidly changing visuals, while slow tempos result in smoother, gradual movements.

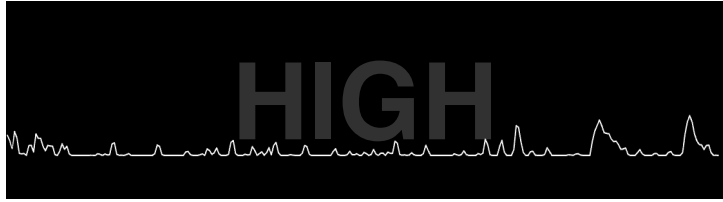
Audio Extraction



#Part 02 - Single Drumhead Strike Experiment

Single drumhead strikes, with varying intensity and frequency, directly affect the wave or particle motion of visual elements, showcasing the rhythm of the sound.

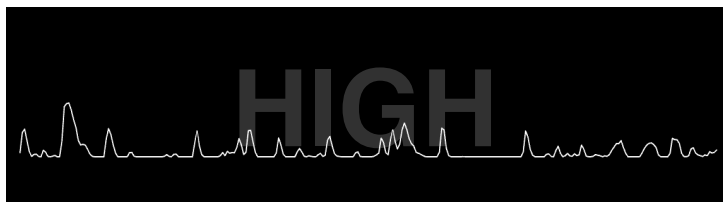
Audio Extraction



#Part 03 - Pop Rhythm Experiment

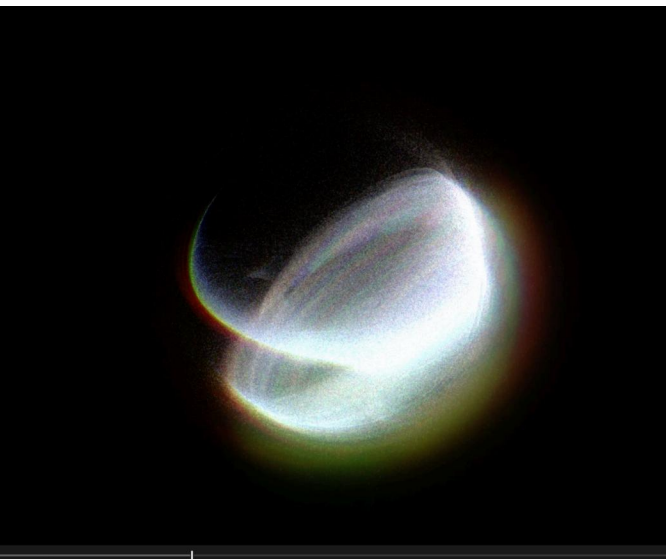
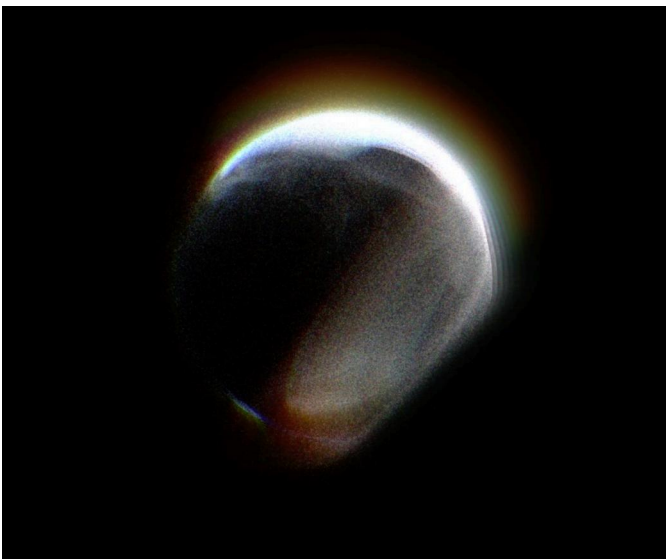
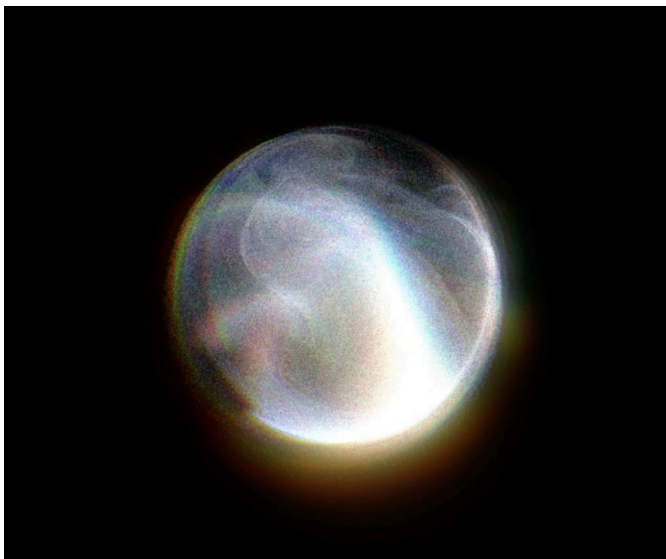
Pop rhythm synchronizes visual elements with the beat, translating the groove of the music into a clear visual experience.

Audio Extraction



#Part 01 - Noise-based Processing

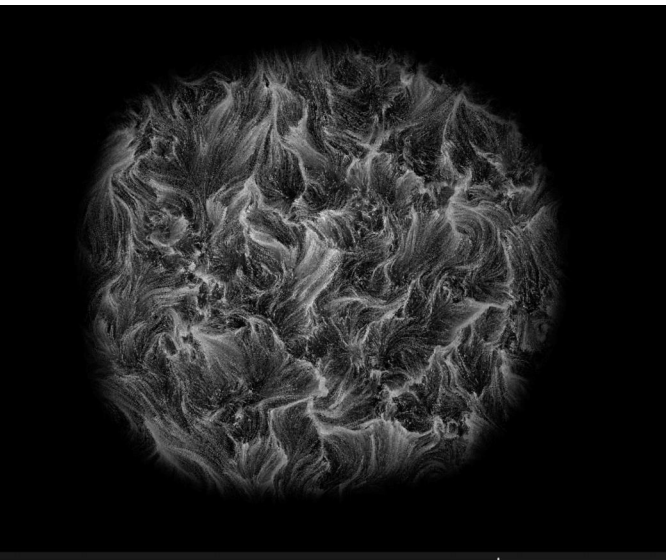
Visualization By *TouchDesigner*



Link to Video: https://youtu.be/3gBz2_ulqE0

#Part 02 - Particle-based Processing

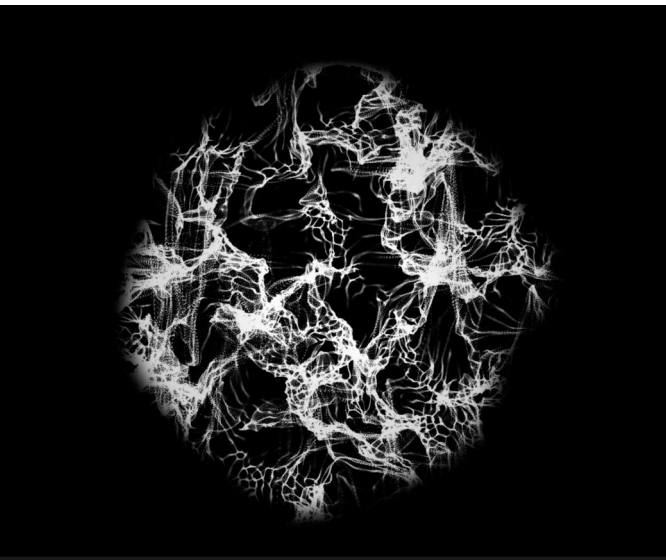
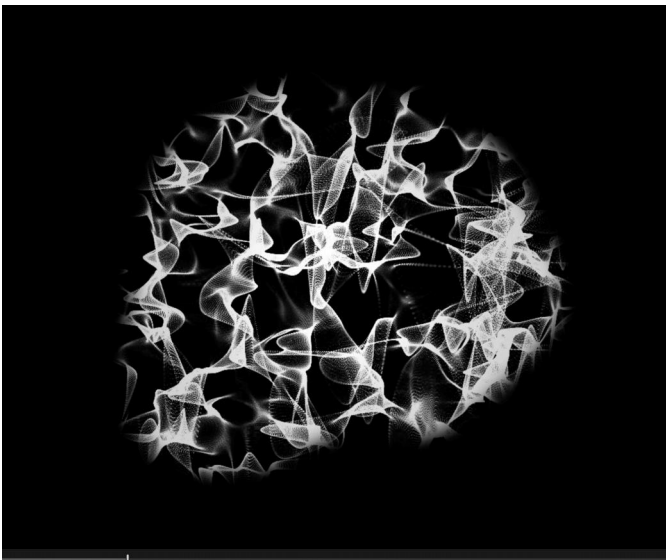
Visualization By *TouchDesigner*



Link to Video: <https://youtu.be/x0wugNBpBBc>

#Part 03 - Wave-based Processing

Visualization By *TouchDesigner*



Link to Video: <https://youtu.be/sqQuQ8GwlyY>

Sound Visualization Project

Visualization Development



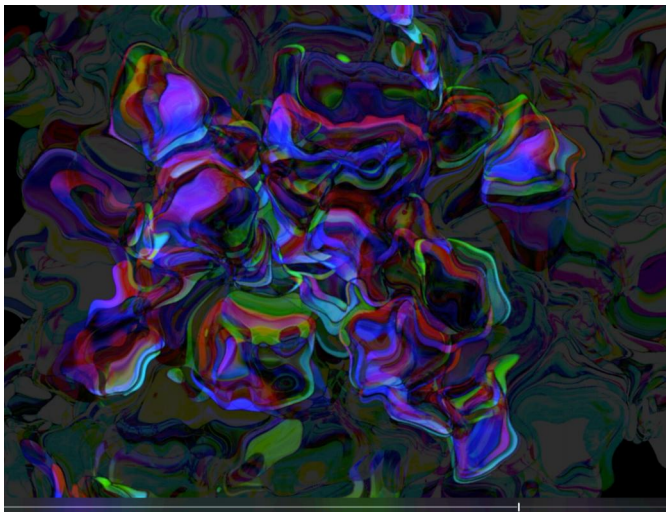
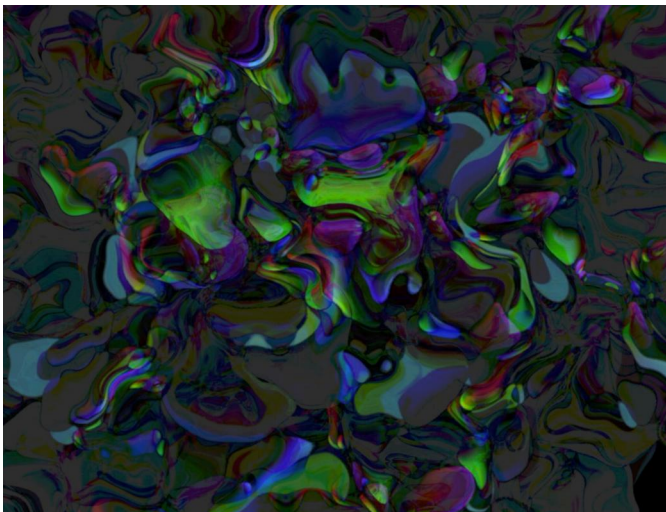
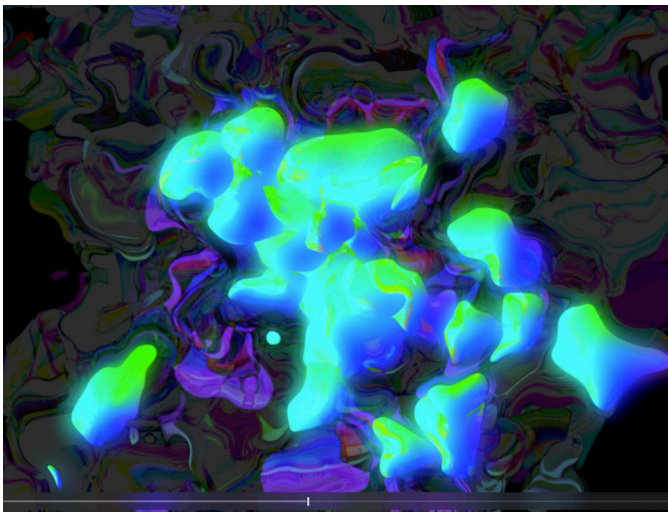
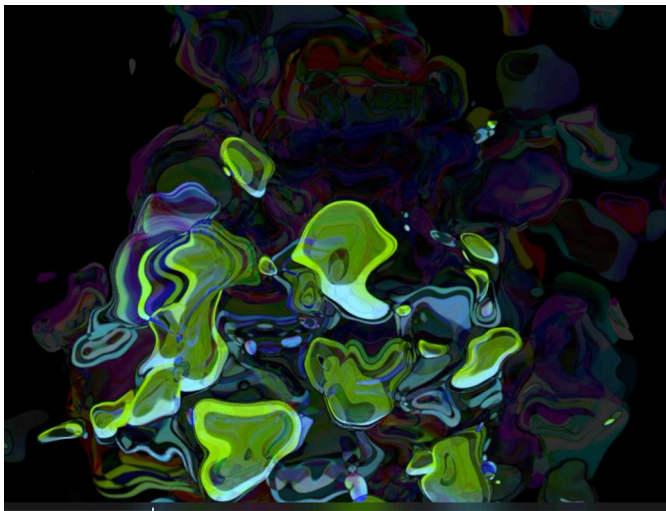
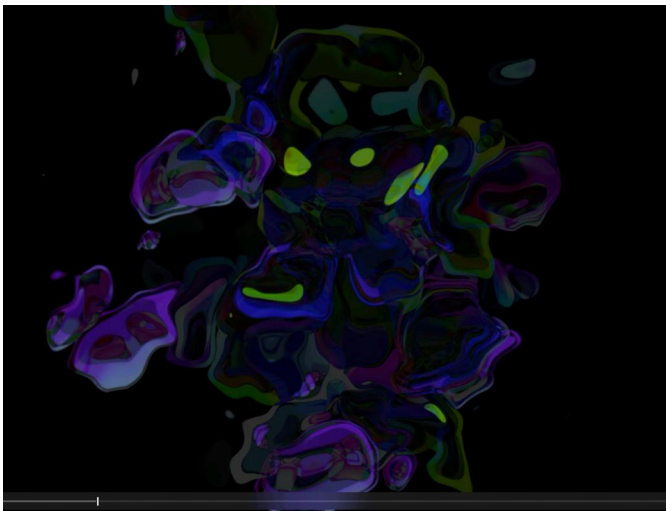
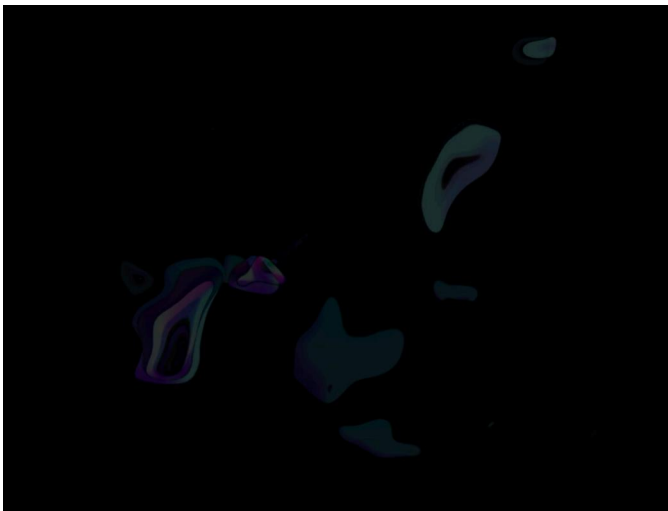
#Final - Freestyle

At the end of the project, I chose a combined Freestyle creation to showcase my interpretation of music, using waveforms, blocks, and color variations to present and integrate the audio with the visual elements.

Audio Extraction



#Growth-based Processing



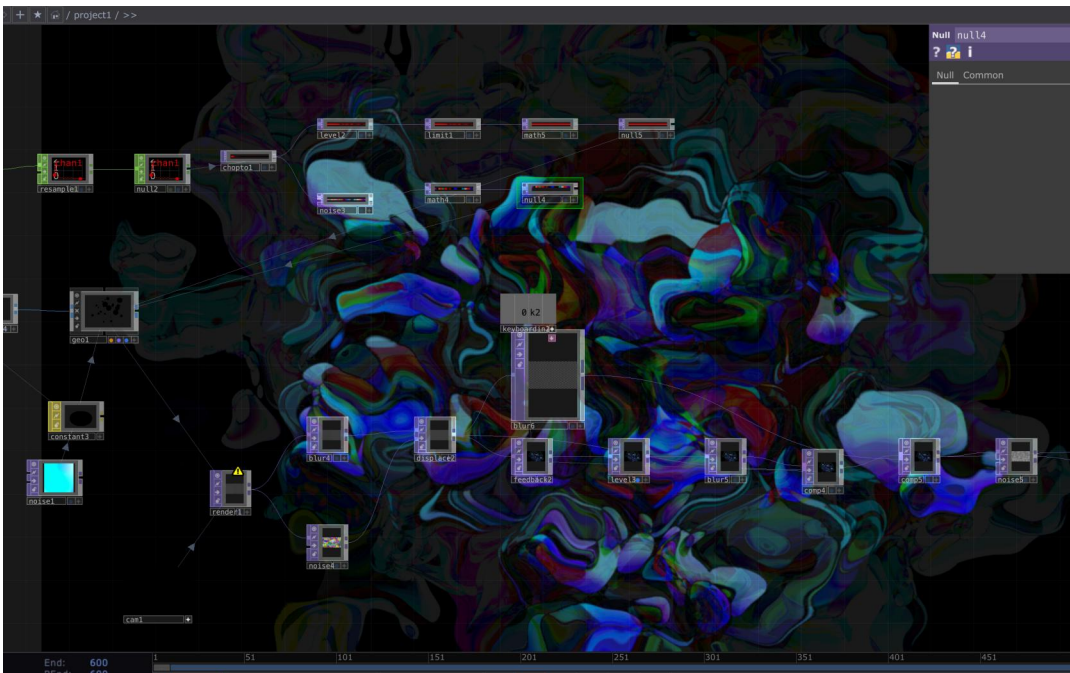
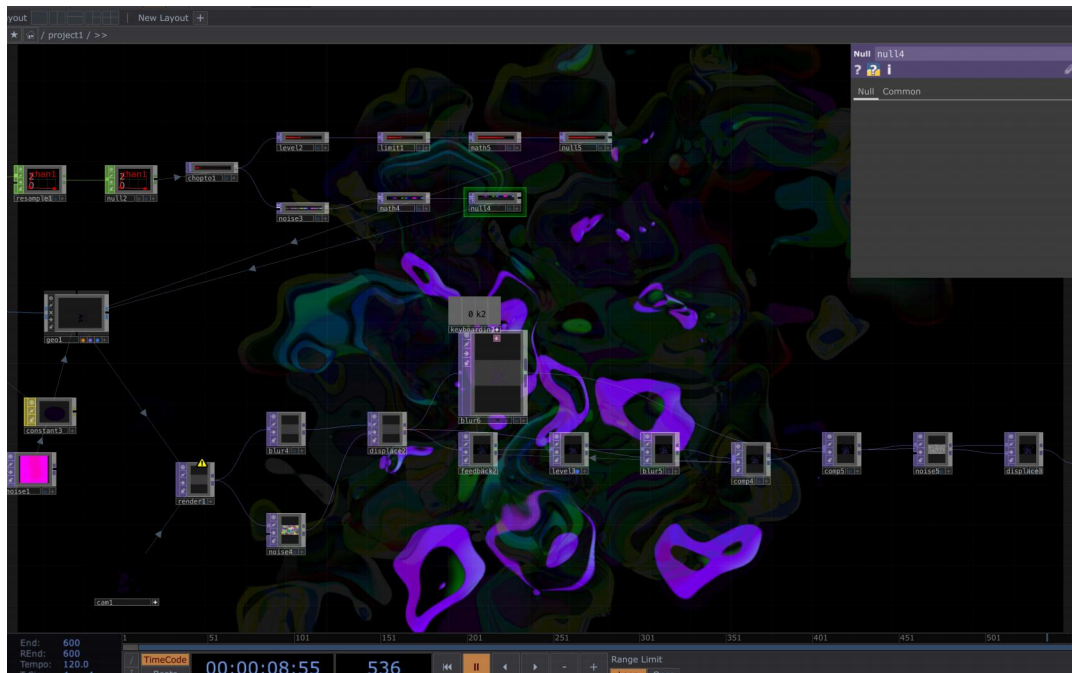
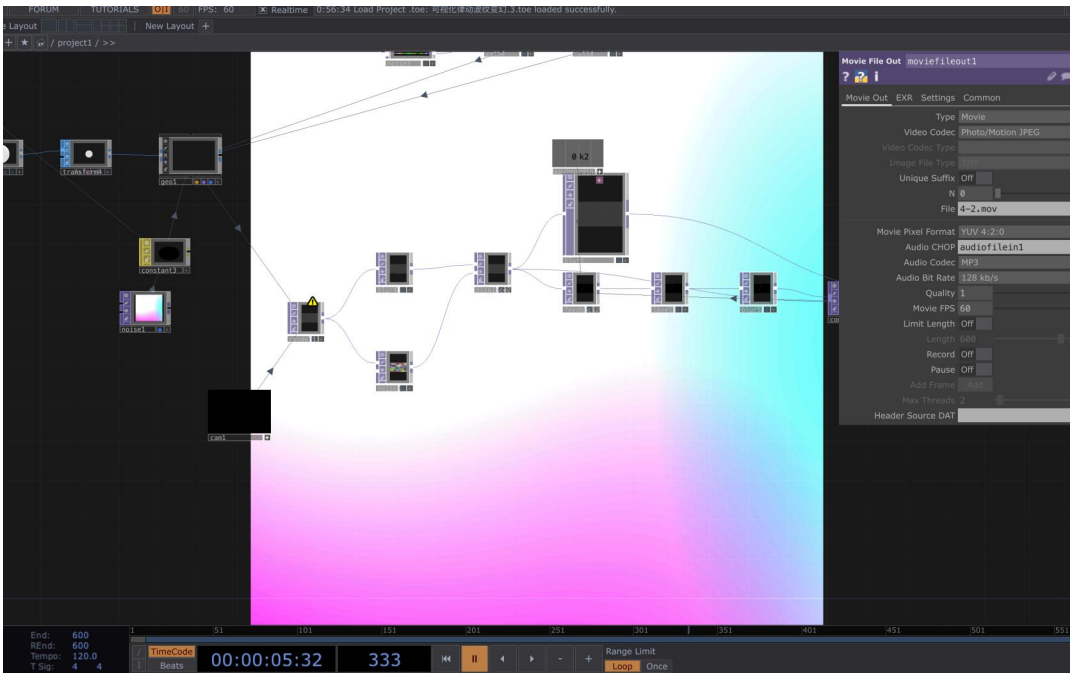
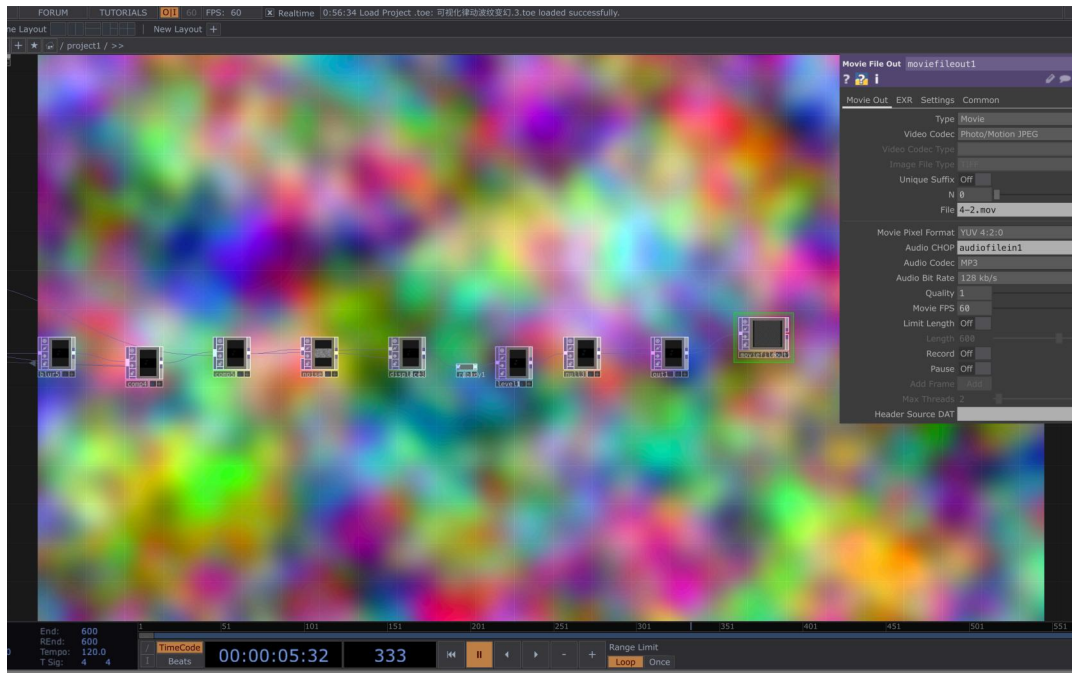
Visualization by *TouchDesigner*

#Color Testing



Different colors convey different emotional expressions, just as varying audio frequencies serve similar functions. Through experimentation, I ultimately selected three primary colors and two secondary colors to present the work.

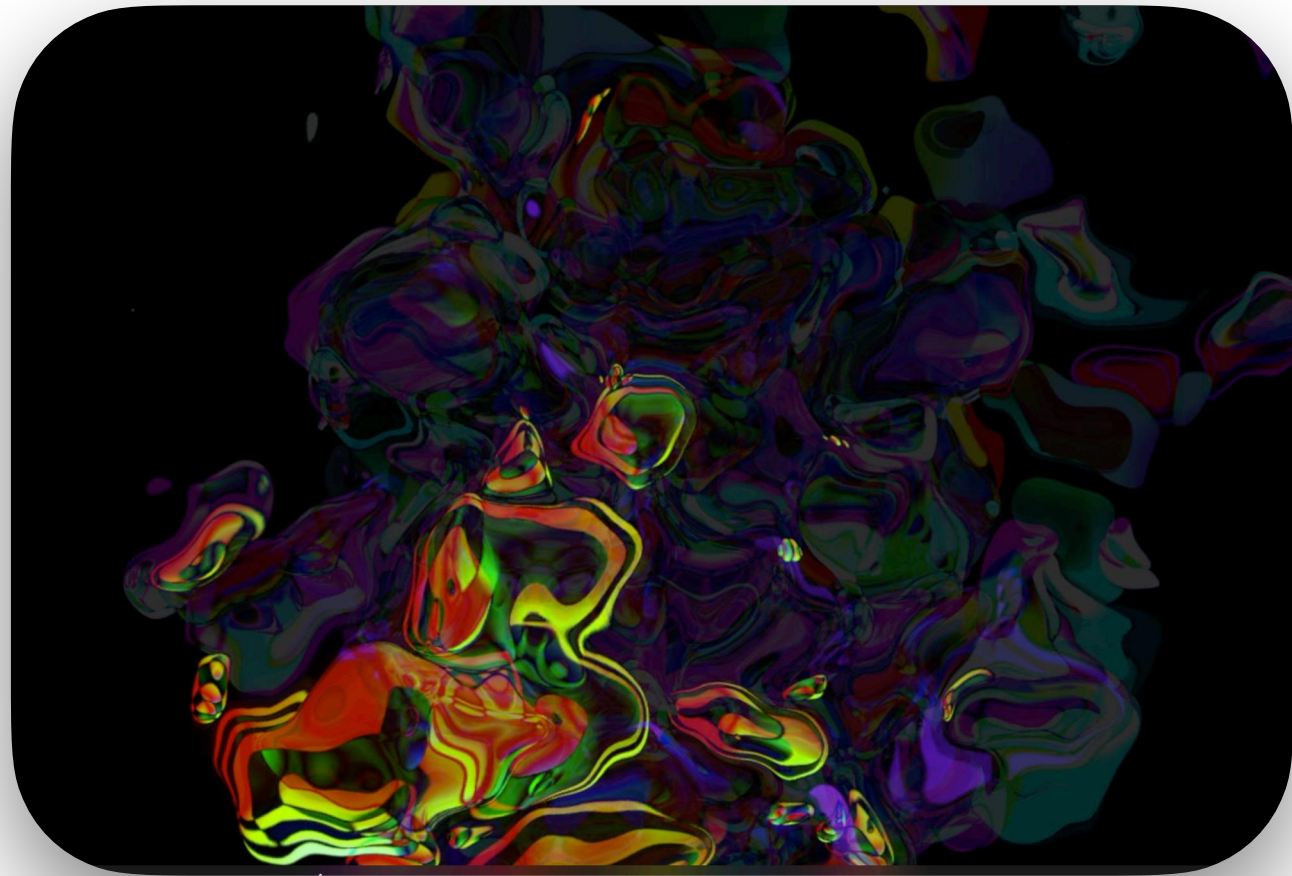
#Working Process



Visualization by *TouchDesigner*

Sound Visualization Project

Final Outcome



Duration: 00:59

Link to Video:

<https://youtu.be/r1DE4fkTfDk>

Coding and Editing Techniques:
CapCut/ Touchdesigner/ Photoshop

Poster Design



Size:
1000*1480 px