

A classical painting depicting Pandora, a woman with dark hair, opening a large, ornate wooden box. She is shown from the waist up, leaning over the box. The box is open, and a plume of smoke or spirits is rising from it. The background is dark and textured, suggesting a cave or a forest. The title 'Pandora's Box' is overlaid in large, white, sans-serif font.

Pandora's Box

Homework for Computer Music – Languages and Systems

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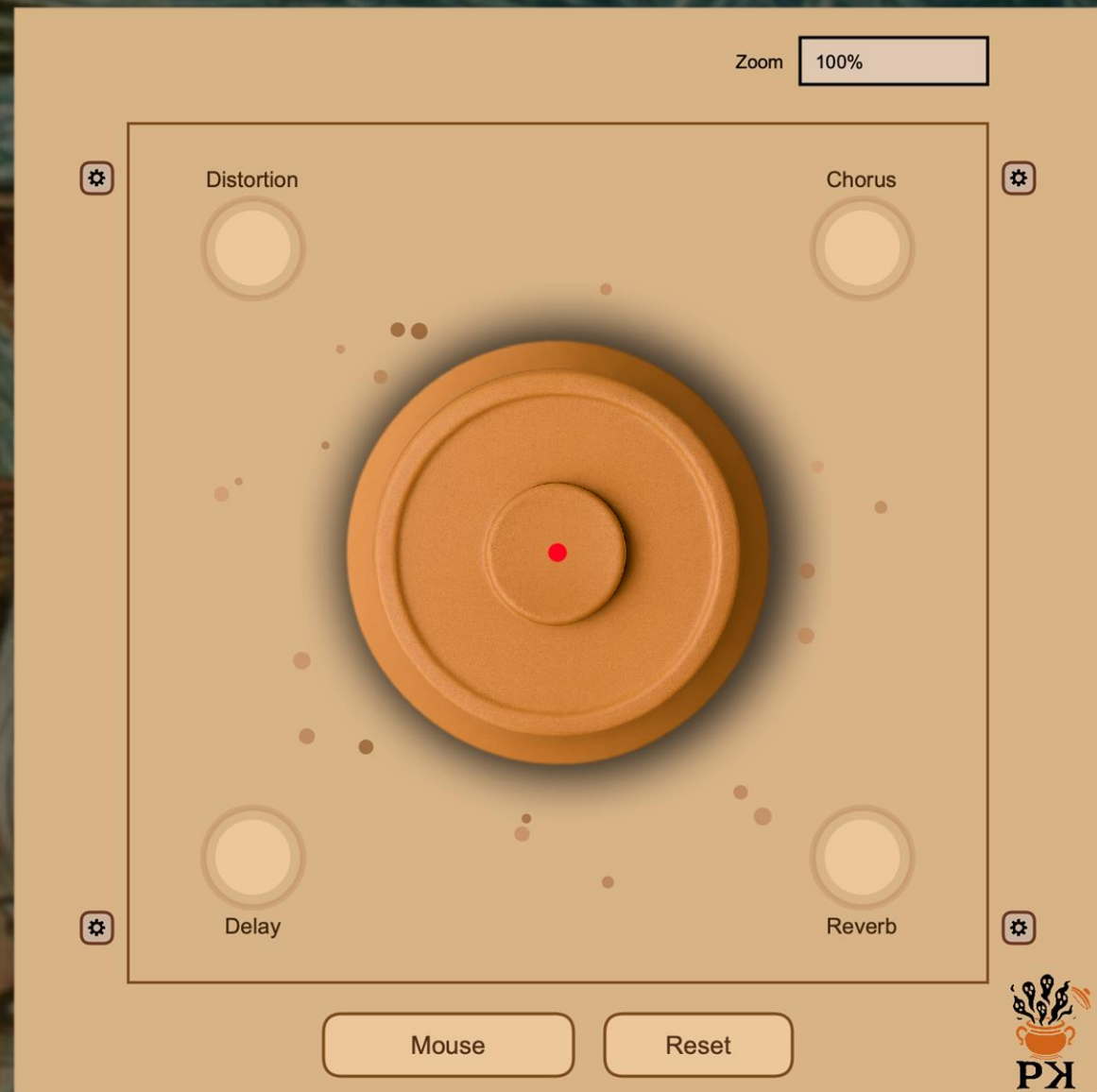
Myth Behind the Project

Pandora opened a forbidden jar out of curiosity, releasing all the evils it contained into the world.



Multi FX

We created a jar containing four effects, so that by opening the lead in the four directions, they can be combined to infect the sound



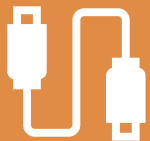
A synthesizer that emulates the sound of flutes, strongly connected to the idea of wind and air

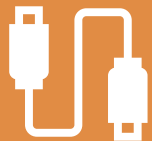
It can be manipulated to create sounds made of pure chaos



JUCE

- Subdivision into classes to allow modular design
- Adoption of Smoothed Values
- Pre-defined effect chain to increase user friendliness





JUCE

Delay

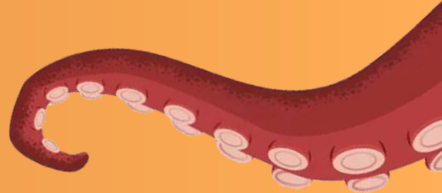

- Emulation of analog delay
- All-pass interpolation
- Pitch modulation when changing time

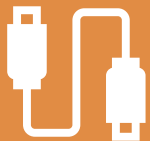




JUCE

Distortion

- Waveshaping through an iperbolic tangent function
 - High-pass filtering with 1 kHz cut-off
- 
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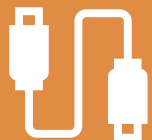


JUCE

Chorus & Reverb

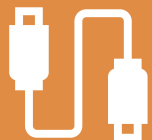
- Implemented using JUCE DSP modules
- Some parameters were fixed to achieve better sound





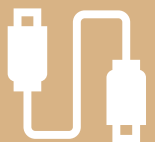
SuperCollider

- Flute like synthesizer developed into a Frequency Modulation one
- Code block structure:
 - OSC communication
 - Synthesis
 - MIDI communication



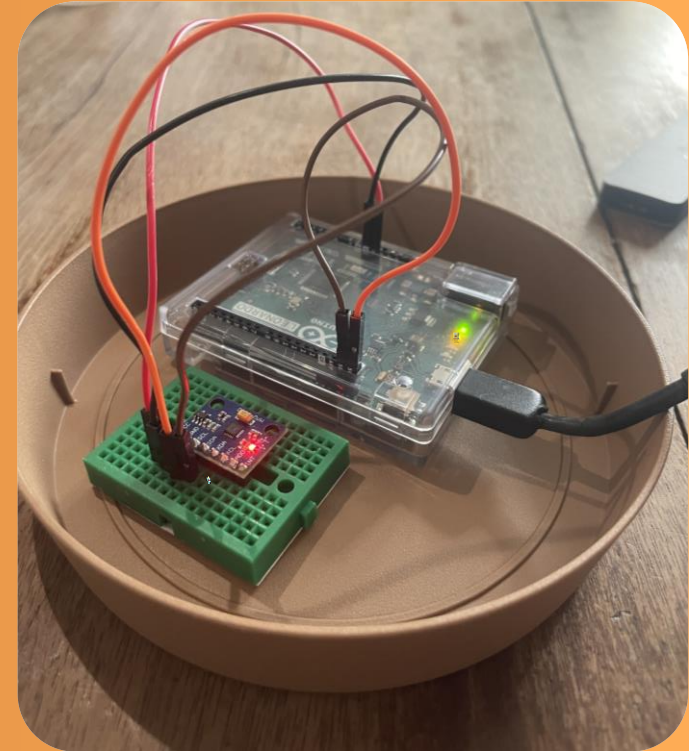
Processing

- Pandora's Suite consists of two separated GUI's
- Reads user interaction and redirects it to SuperCollider



Arduino

- MPU-6050 Accelerometer
- Jumpers: 5V, GND, SDA, SCL
- Normalize value to 0-1 range



Pipeline

Juce



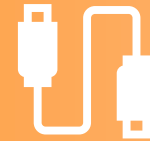
SuperCollider



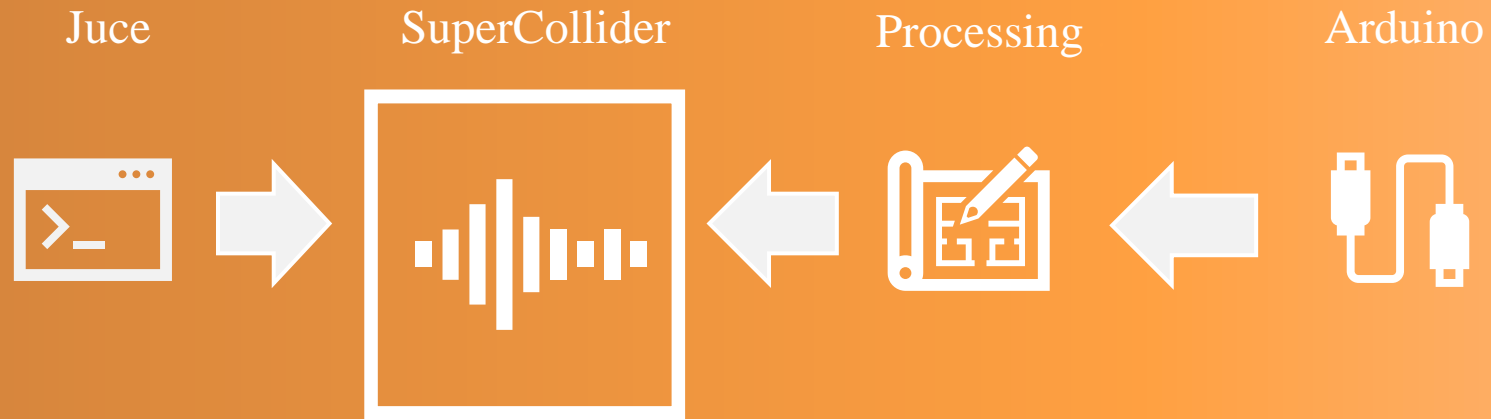
Processing



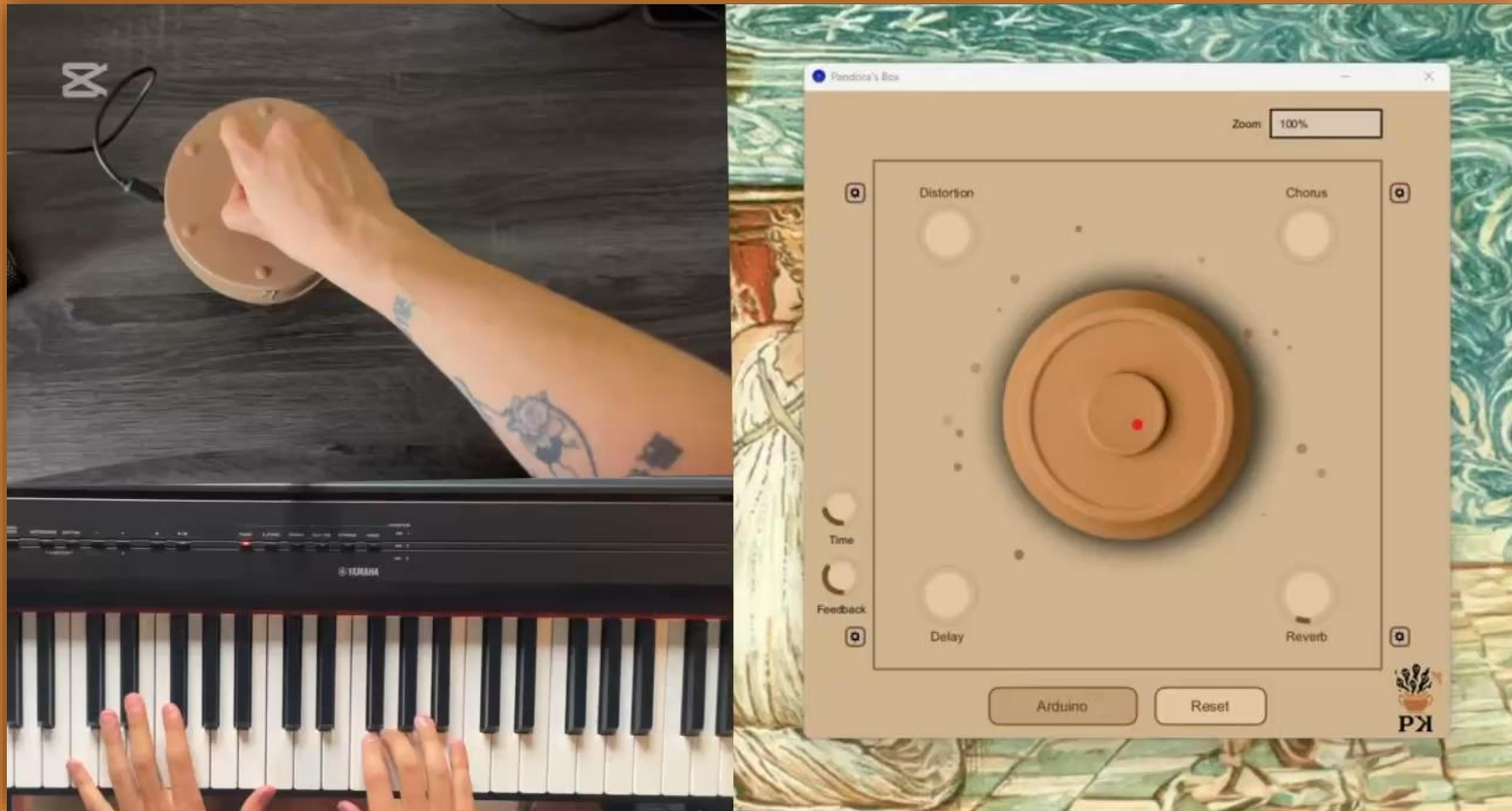
Arduino



Pipeline



Pandora's Box



Pandora's Synth



A classical painting depicting Pandora kneeling on a checkered floor, reaching into an ornate wooden chest with a red interior. A large, swirling blue and white cloud or smoke billows from the chest, and a winged figure is partially visible in the upper left. The scene is set in a room with a tiled floor and a patterned rug.

Thanks for the attention

Pandora's Knights

