

The background features two large, smooth, curved bands. The upper band is a dark purple color, while the lower band is a light blue. Both curves flow from the left side towards the right, creating a sense of motion against a solid black background.

WAVEX

George Harrison

PROJECT DESCRIPTION

Virtual Software Synthesizer

Used to design and generate sounds for music production

Standalone and VST format

Compatible with most DAWs (digital audio workstations)

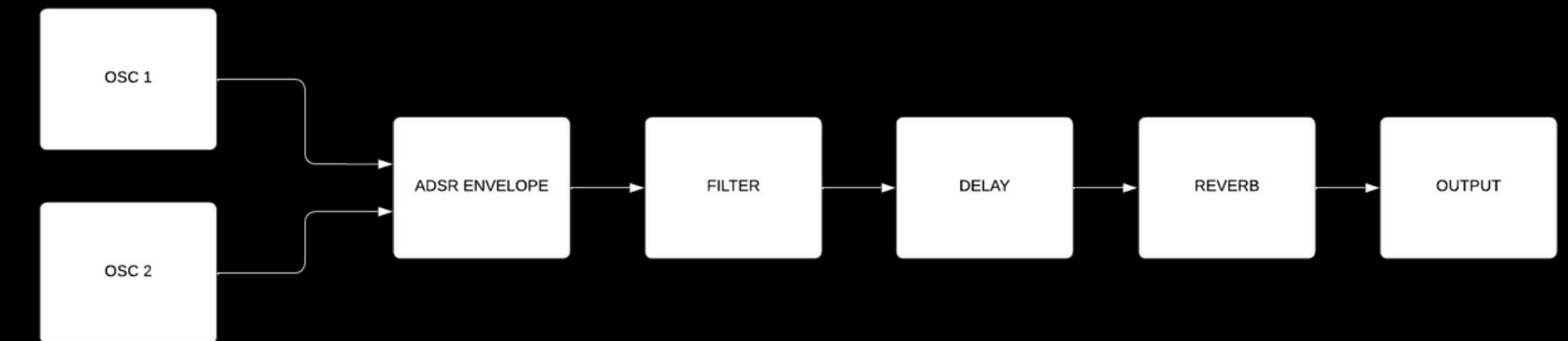
Audience

Music producers and sound designers

PROJECT GOALS

Implement Basic Synth Features

- 2 oscillators with 3 waveform types
- ADSR envelope
- Filter
- Reverb and delay effects
- 8 voice polyphony
- Waveform visualizer
- Preset browser



PROJECT JUSTIFICATION

Music Background

- Use VSTs often for music production

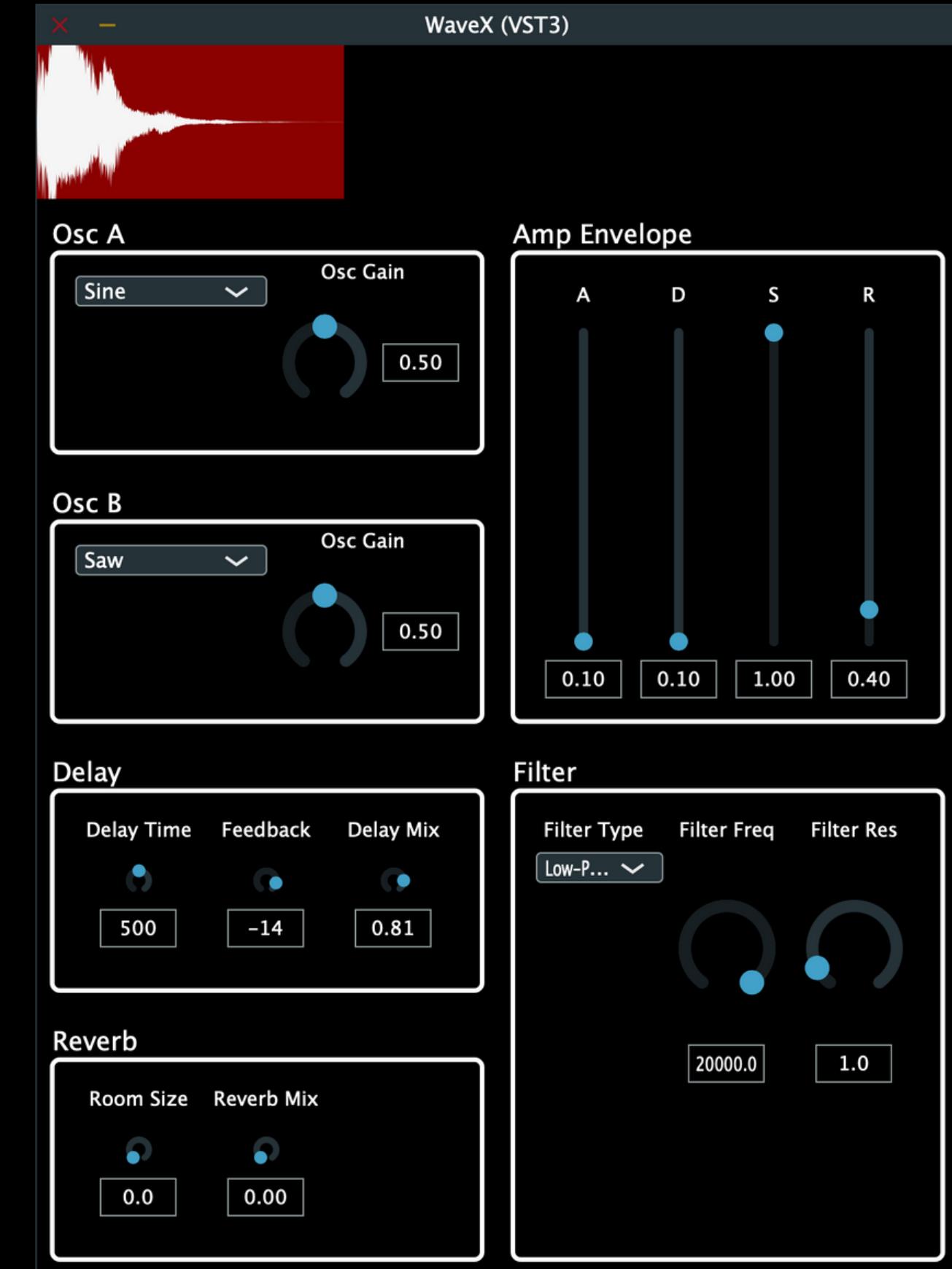
Explore DSP Programming

- Expand upon C++ skills in a new context
- Learning the JUCE framework

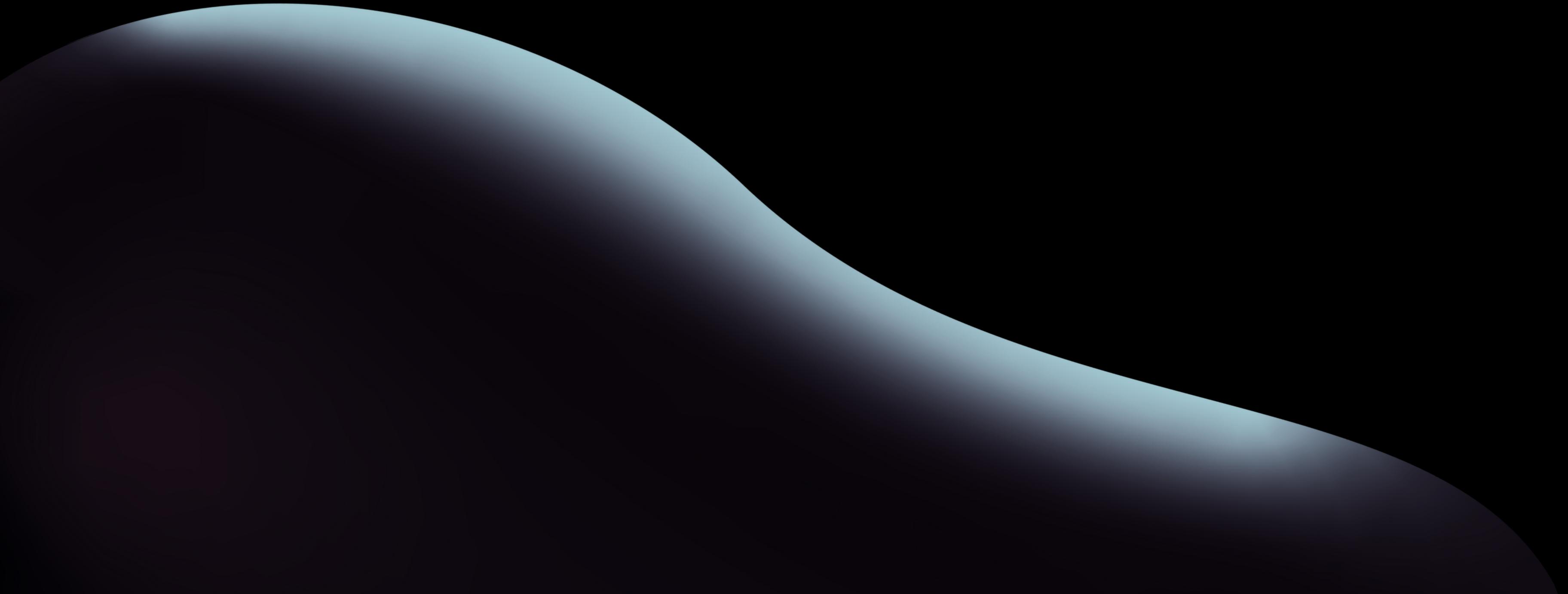


JUCE

USER INTERFACE



DEMO



PROJECT CHALLENGES

Limited Resources on JUCE / Audio Programming

- Most are for effect plugins
- Trial and error for implementing synth features such as polyphony

DSP Programming is delicate

- Lots of crackling and artifacts

PUNCH LIST

GUI

- Overhaul GUI
- Add GUI keyboard for standalone

Reverb and Delay

- Fix feedback values of delay
- Separate reverb and delay mix

Polyphony

- Fix clicking and weird behavior

Preset Browser

- Stretch goal

QUESTIONS