

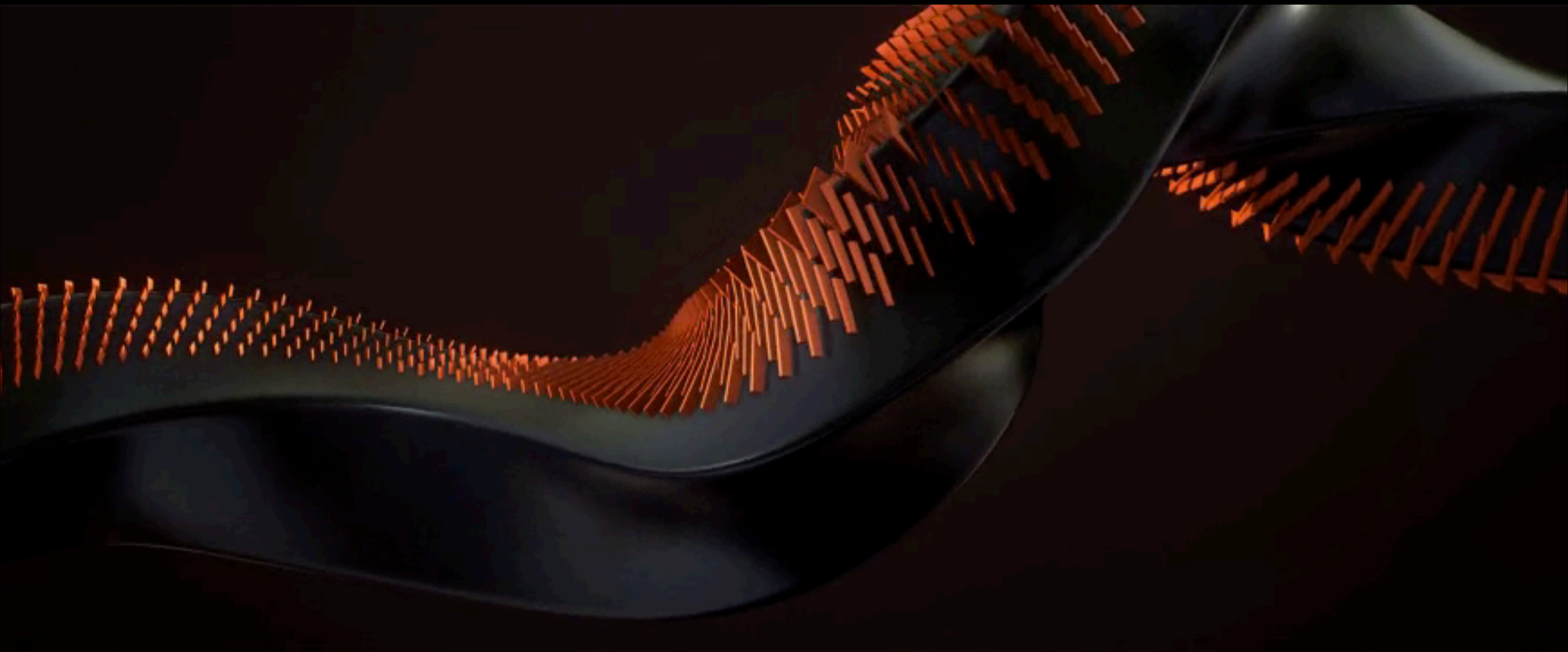
07/05/2017

LABORATÓRIO DE SOM E IMAGEM
2016/2017

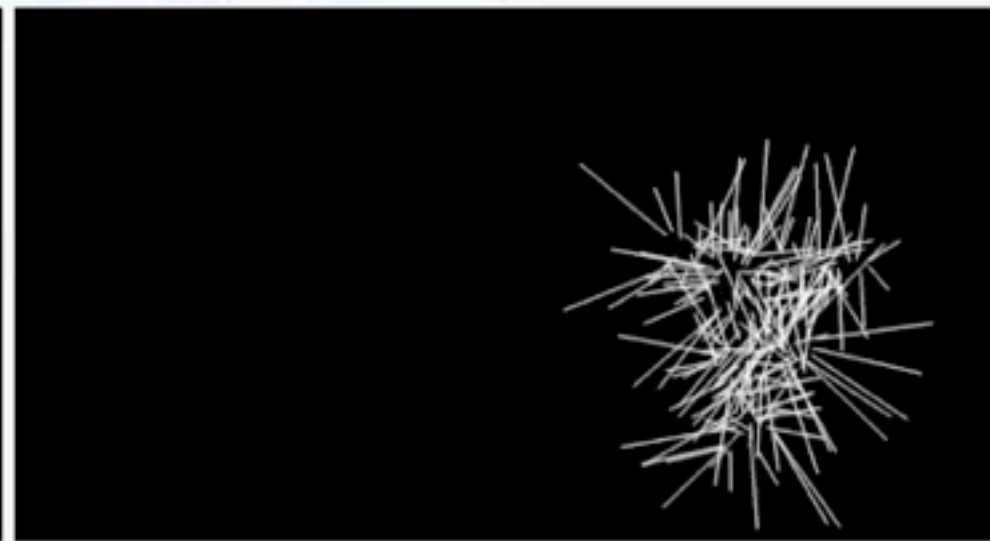
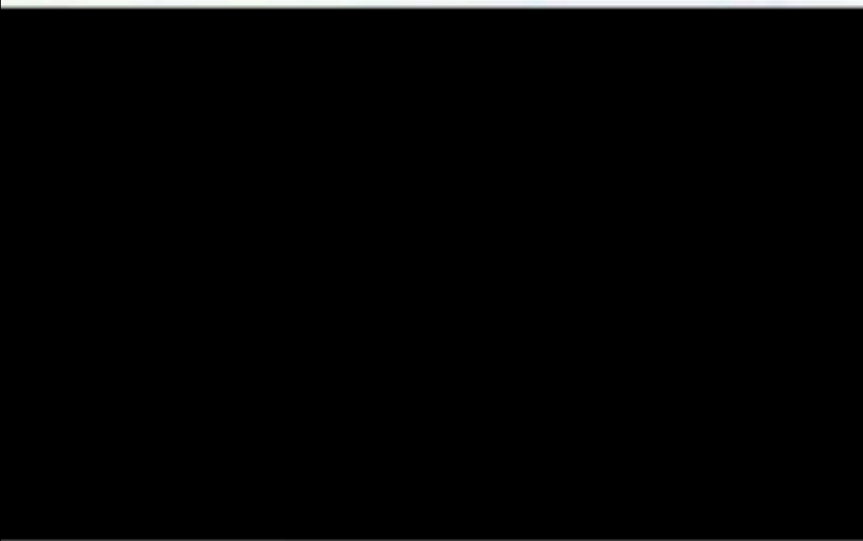
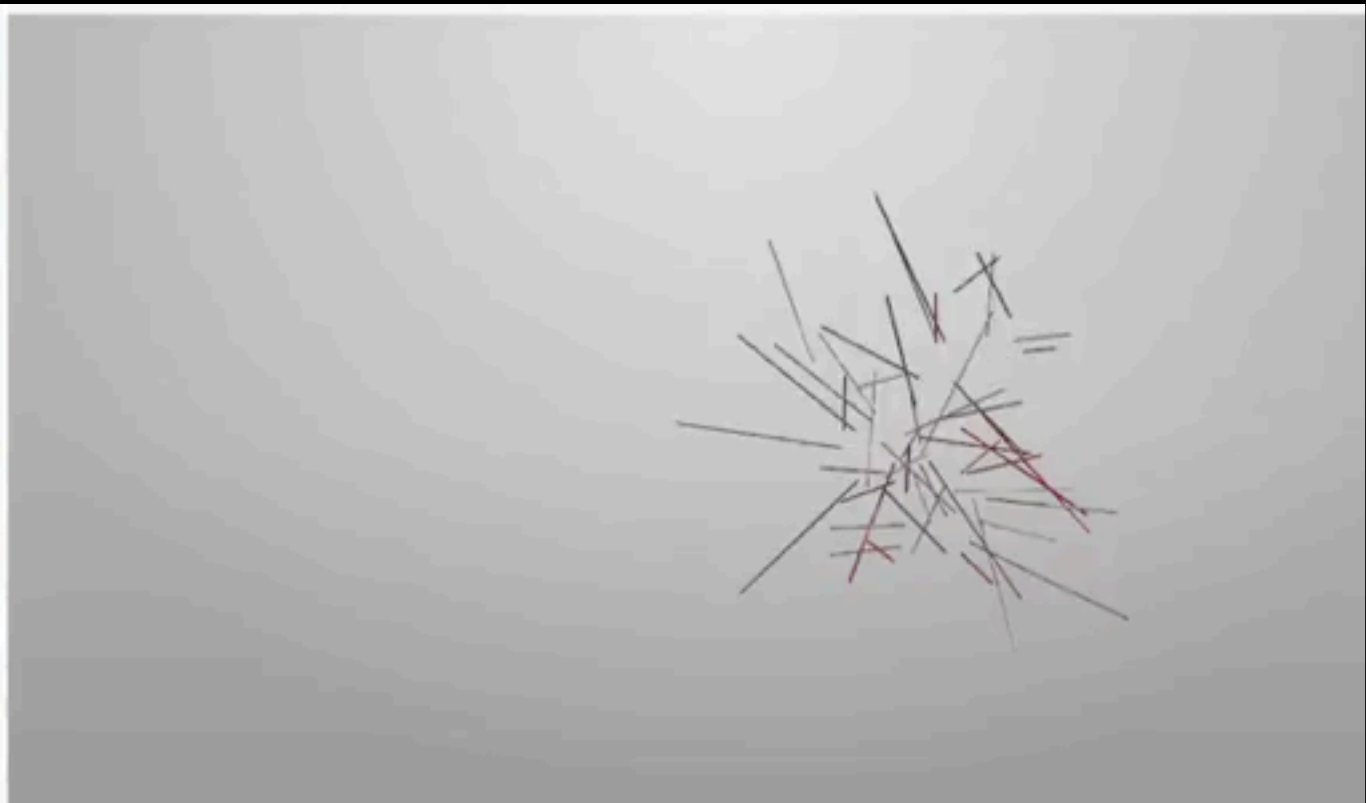
INTRODUÇÃO À PROGRAMAÇÃO COM PROCESSING

RODRIGO CARVALHO

[/GITHUB.COM/VISIOPHONE/LSI](https://github.com/visiophone/lsi)



FLEXURE
QUAYOLA & SINIGAGLIA / 2013



FORMS (PROCESS)
MEMO AKTEN + QUAYOLA / 2012

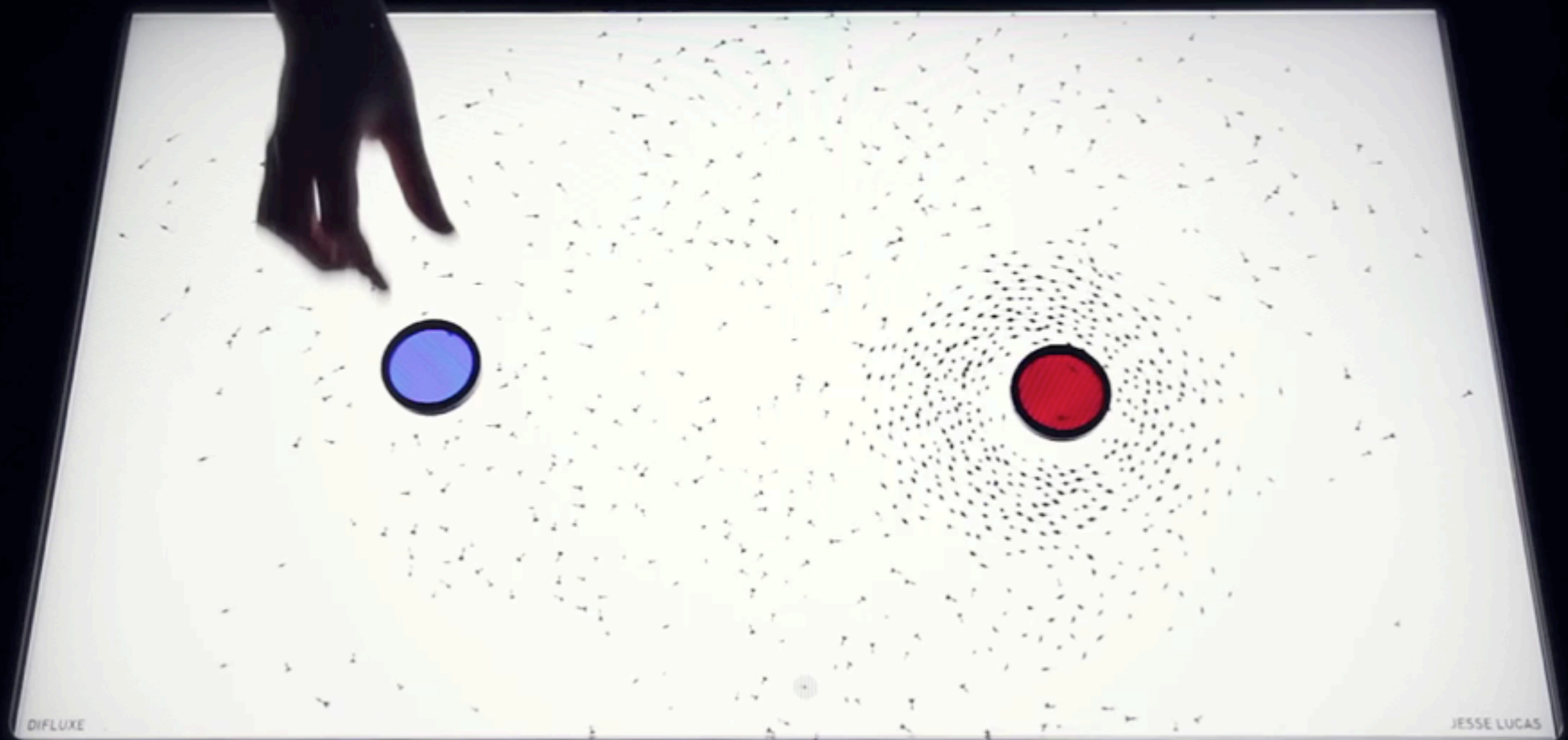


FORMS
MEMO AKTEN + QUAYOLA / 2012

IS IT POSSIBLE TO TRULY SIMULATE REALITY?



CLOUDS – DOCUMENTARY
DEEPSPEED MEDIA / 2014



DIFLUXE
JESSE LUCAS / 2012

PROCESSING SOUND

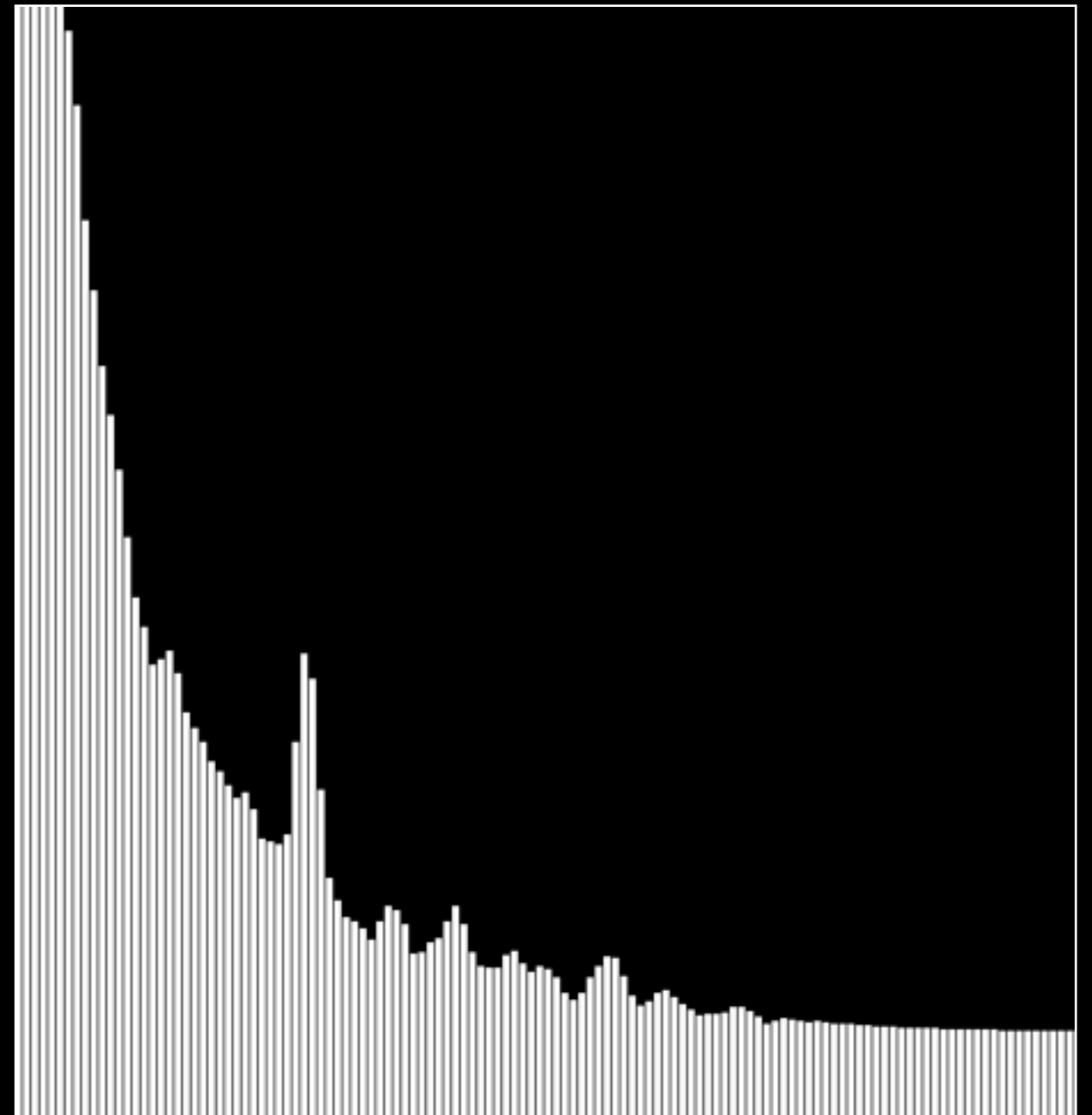
```
// import library
import processing.sound.*;

// Define how many FFT bands we want
int bands = 128;

//Load and play a soundfile/loop it
sample = new SoundFile(this, "");
sample.loop();

// Create and patch the FFT analyzer
fft = new FFT(this, bands);
fft.input(sample);

// ARRAY OF AMPLITUDES
float[] freq = new float[bands];
```



PROCESSING LIBRARIES

EXTENDING PROCESSING FUNCTIONS

3D
SOUND
VIDEO
DATA
TYPOGRAPHY
GUI
COMMUNICATION

Contributed libraries are developed, documented, and maintained by members of the Processing community. For feedback and support, please post to the [Forum](#). For development discussions post to the [Create & Announce Libraries](#) topic. Instructions for creating your own library are on the [Processing GitHub](#) site.

3D
Animation
Compilation
Data
GUI
Geometry

Hardware
I/O
Language
Math
Other
Simulation

Sound
Typography
Utilities
Video & Vision

3D

» [PeasyCam](#)

by [Jonathan Feinberg](#)

A mouse driven camera-control library for 3D sketches.

» [planetarium](#)

by [Andres Colubri](#)

This library provides a renderer to project 3D scenes on a full dome.

» [Culebra Behavior Library for Processing](#)

by [Luis Quinones](#)

A collection of objects and behaviors for creating dynamic multi agent interactions.

» [QueasyCam](#)

by [Josh Castle](#)

A super-simple FPS camera for Processing.

» [Picking](#)

by [Nicolas Clavaud](#)

Pick an object in a 3D scene easily.

» [Camera 3D](#)

by [Jim Schmitz](#)

Alter P3D Rendering to produce Stereoscopic Animations and other 3D effects.

» [Shapes 3D](#)

by [Peter Lager](#)

3D Shape creation and display made easy.

» [OCD: Obsessive Camera Direction](#)

by [Kristian Damkjær](#)

The Obsessive Camera Direction (OCD) library allows intuitive control and creation of Processing viewport Cameras.

» [Patchy](#)

by [Jonathan Feinberg](#)

Patchy provides an easy-to-use bicubic patch for 3D Processing sketches.

» [proscene](#)

by [Jean Pierre Charalambos](#)

Library that eases the creation of interactive scenes.

» [Collada Loader for SketchUp and Blender](#)

by [Markus Zimmermann](#)

Importer for kmz and dae files created by 3D softwares SketchUp 8 or Blender 2.75a

» [HE_Mesh](#)

by [Frederik Vanhoutte](#)

HE_Mesh is an implementation of a half-edge datastructure for creating and manipulating 3D meshes.

» [iGeo](#)

by [Satoru Sugihara](#)

3D geometry library with packages of NURBS geometry, polygon mesh geometry, vector math, 3D display and navigation, 3D data file I/O and agent-based 3D geometry modeling.

<https://processing.org/reference/libraries/>

PROCESSING LIBRARIES

1 INSTALL LIBRARY

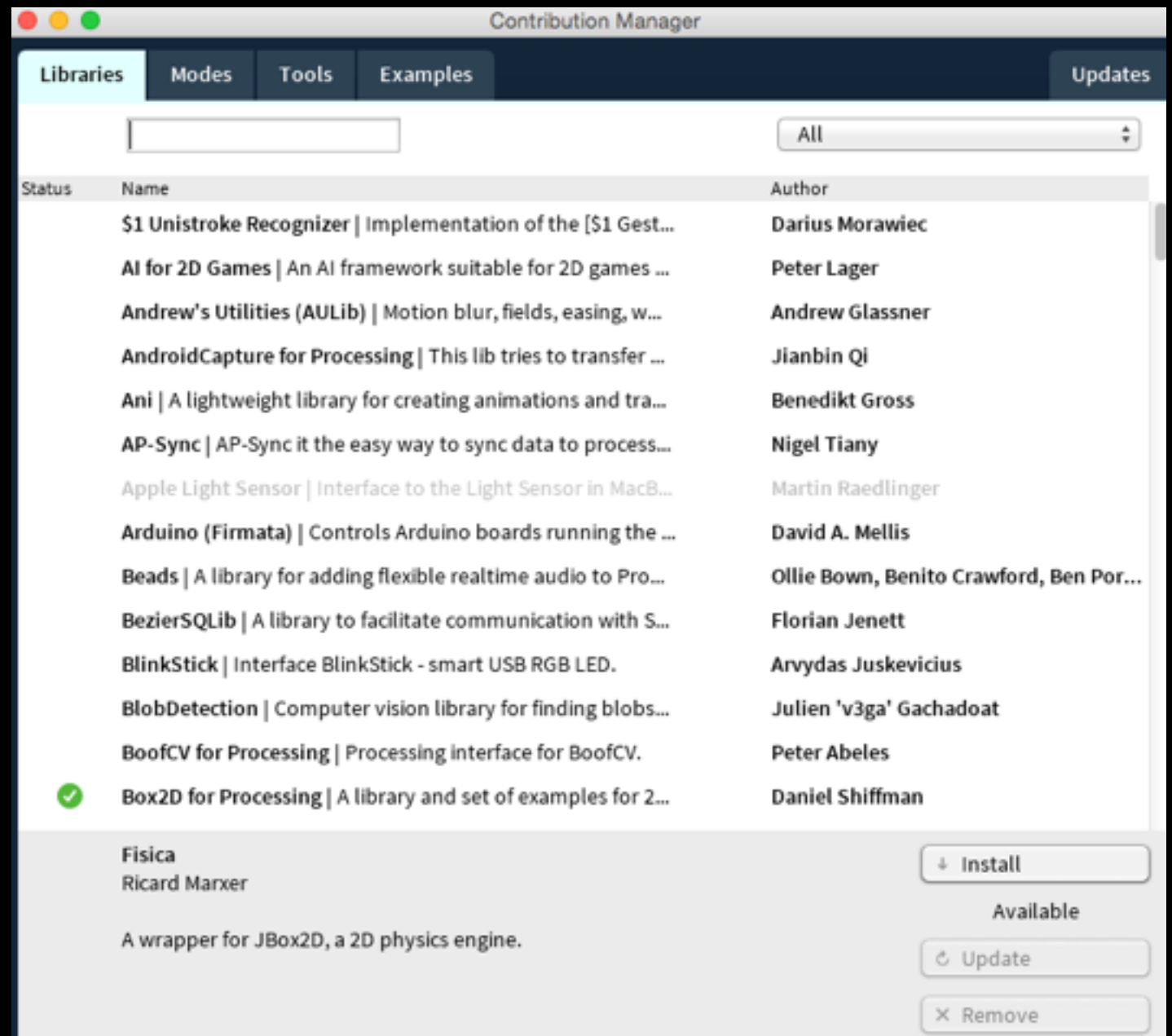
MENU->SKETCH->IMPORT LIBRARY
-> ADD LIBRARY

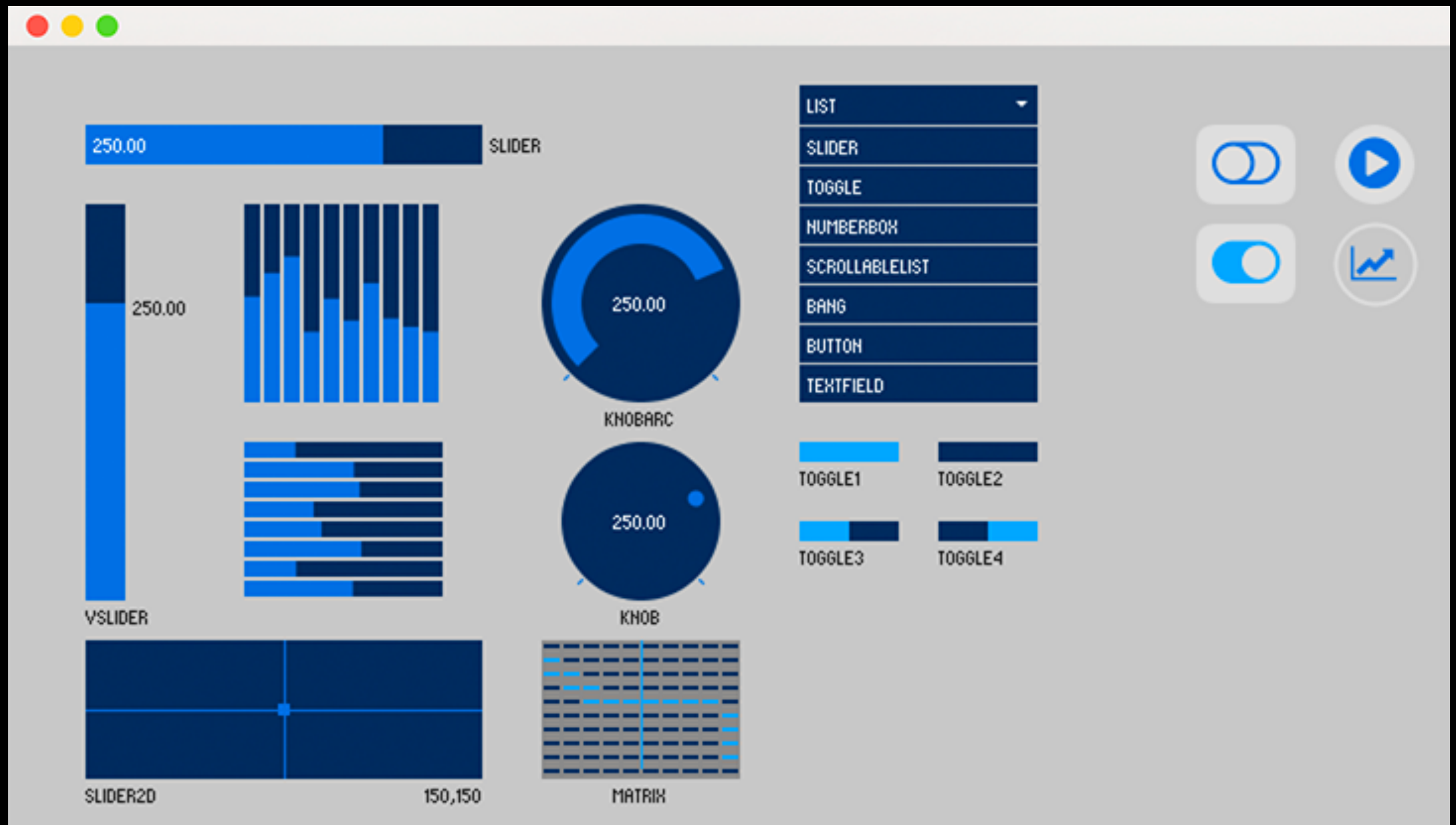
2 EXPLORE EXAMPLES

MENU-> FILE EXAMPLES ->
LIBRARY NAME

3 MORE INFORMATION

LIBRARY URL PAGE

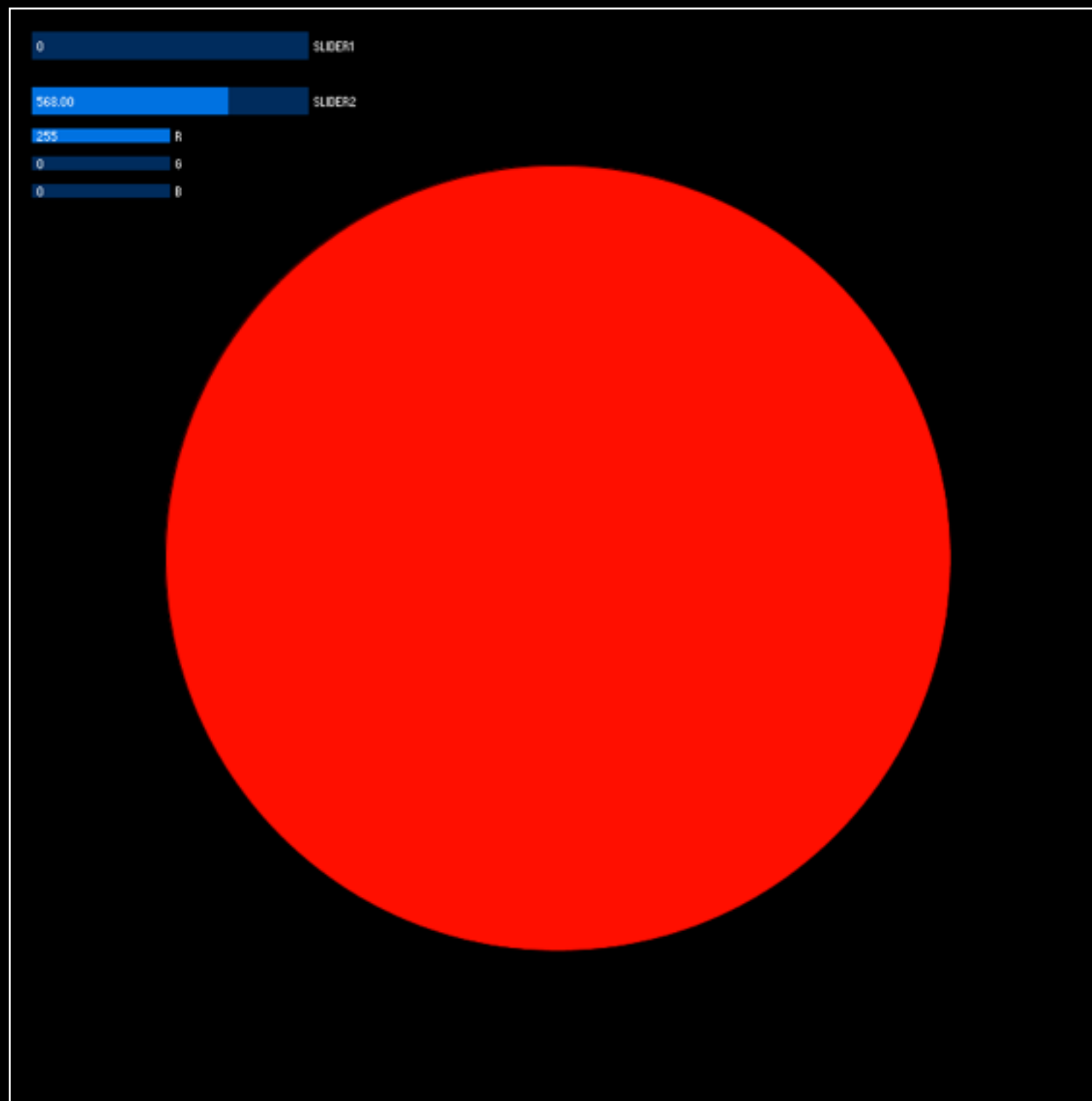




CONTROL P5

USER INTERFACE LIBRARY

[HTTPS://GITHUB.COM/SOJAMO/CONTROLP5](https://github.com/sojamo/controlp5)



CONTROL P5
USER INTERFACE LIBRARY