Polygon music visualizer

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Course: Intro the sound

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Modul: Audio / Visuelle Artikulation

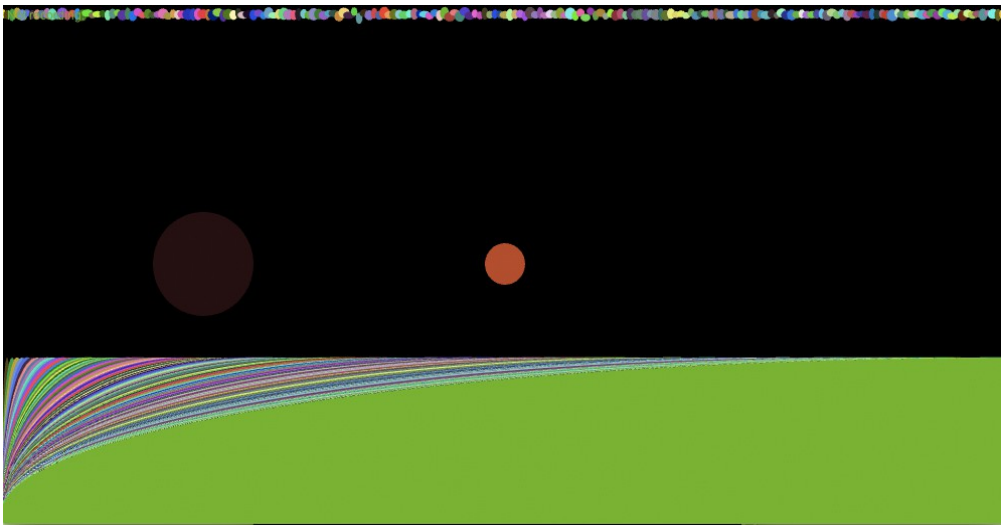
Lecturer: Vanesa Cortés Rodríguez

Abstract

The minim library of Processing allows to analyse different audio informations. With these possibilities I created a music visualization with modified different versions.

Introduction

During the last task of our course we had to program with sound information but in our group we actually didn't know what we have done. We just took some code of the examples and change something in hope it would change something. So this came out:



This result is looking – in my opinion – like something crazy and random. We did this visualization by „try and error“ and this is not programming. We should know what are you doing so I want to create a music visualization as project again but knowing what I am doing. I want to learn as much as possible about these possibilities. I get my idea for the visualization from a book which explains polygons. I wanted to create polygons which react to the music.

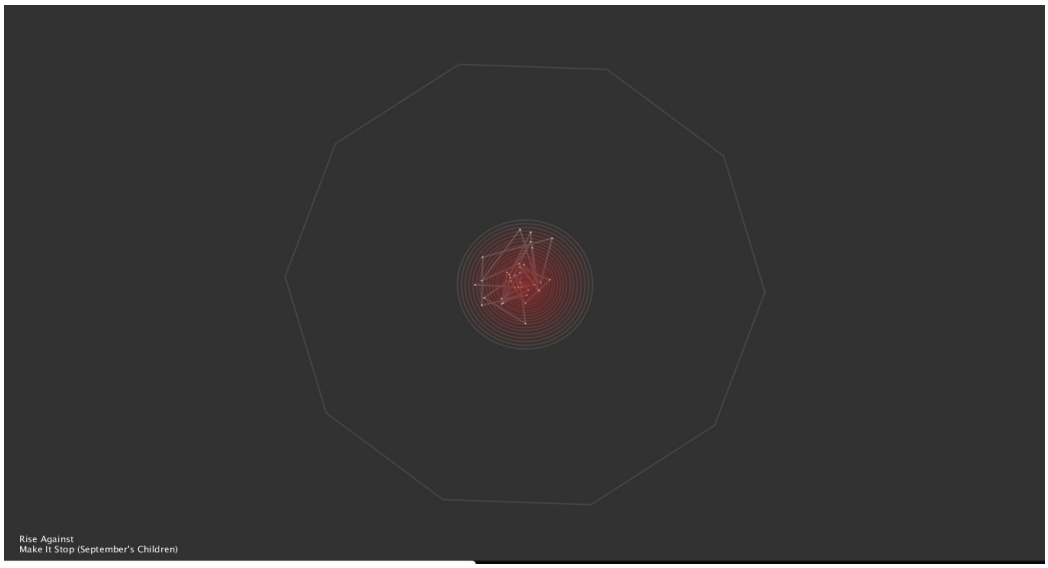
Project

You can switch between three version of the visualization by pressing the key 1 to 3. At first they look the same but they all have some little differences that is why they each look a little bit different. The number of the edge is created by the music position/100 multiply with the bands of frequences.

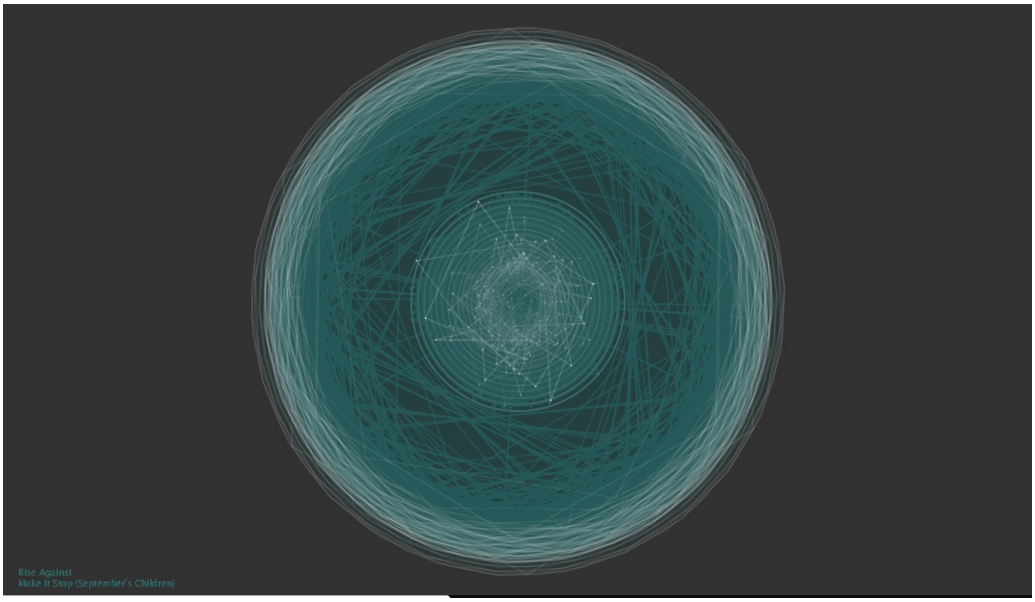
The left channel of the streaming audio is responsible for the size/radius. In the middle of the polygon you can see the circles react by the beat and the lines in version 1 and 2

react to the left and right channel. A progress bar, the interpret and song name are located at the bottom. You can switch between 5 songs through the arrow keys right and left.

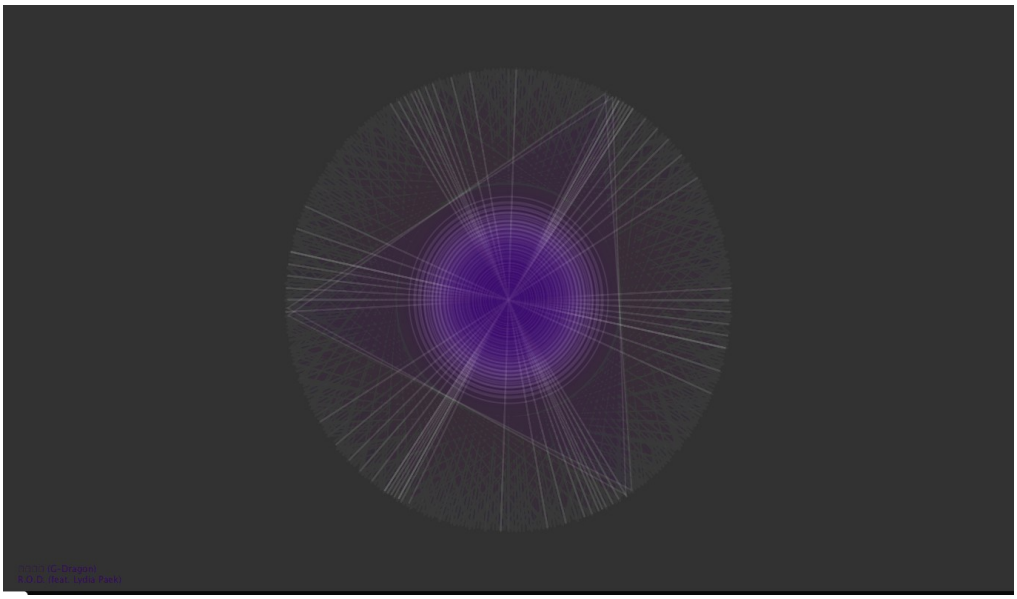
- Version 1



- Version 2



- Version 3



Results

See above or start the programm to see the result.

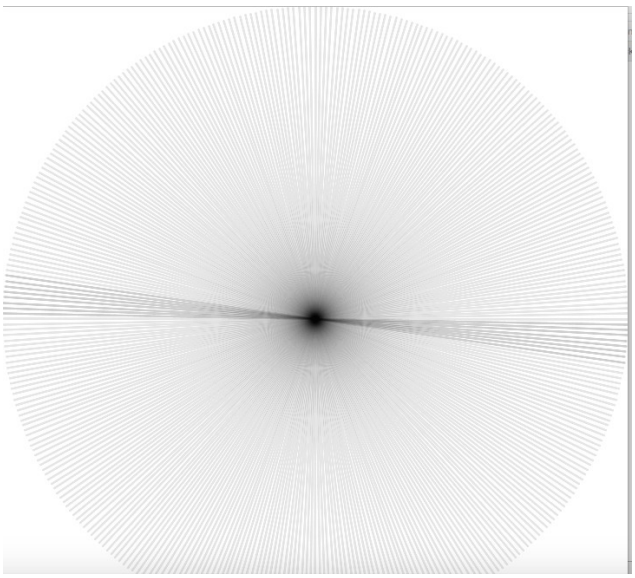
Conclusion

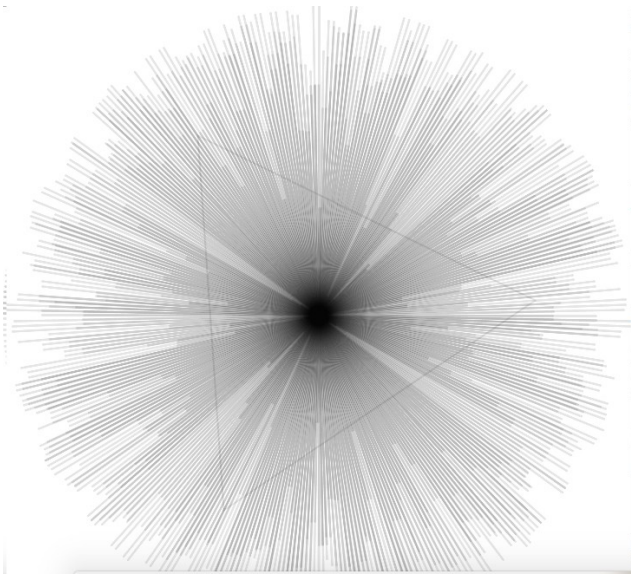
I reached my goal to create a music visualization with polygons with understanding what I am doing. I was able to use the minim library through a lot of tutorials and explainations. Even though I don't use all of them I know a lot of possibilities of the minim library.

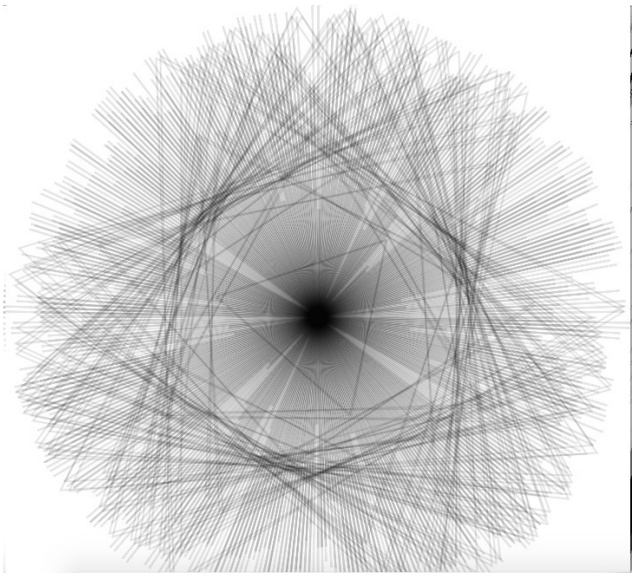
Finally I understand how to use ArrayLists and more than one class in practice. I learnt something new about radians, rotate(), pushMatrix() and popMatrix() and much more. All in all I can say that I learnt more than I thought I would.

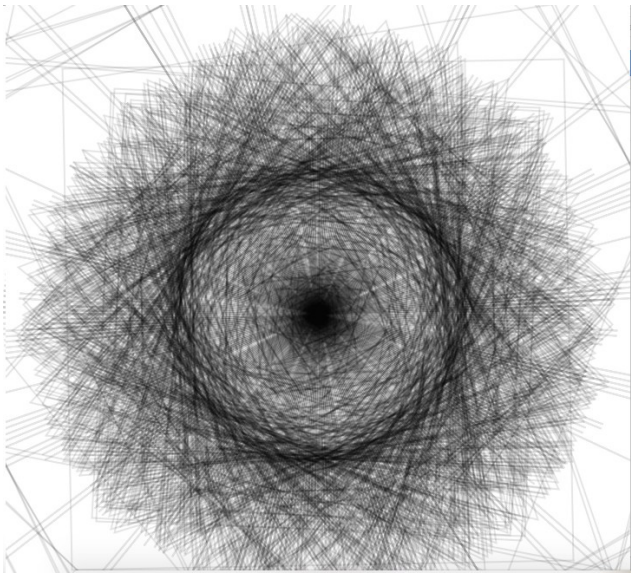
Documentation

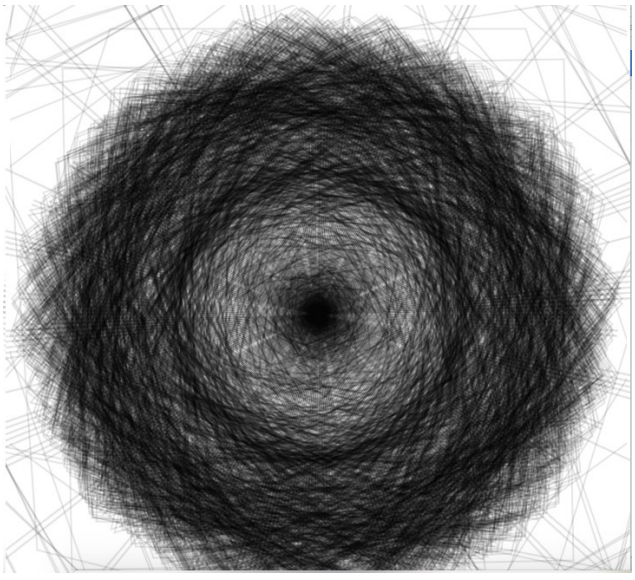
Screens during programming

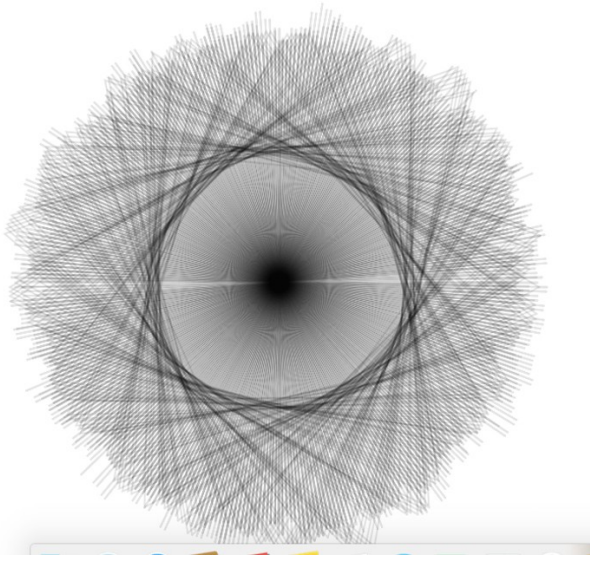


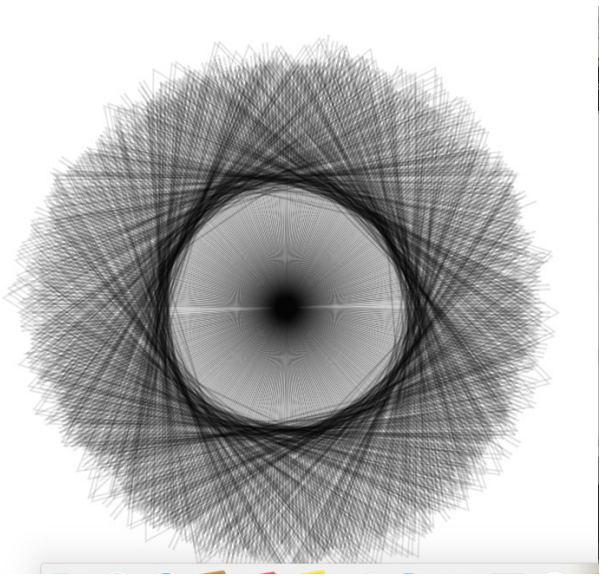


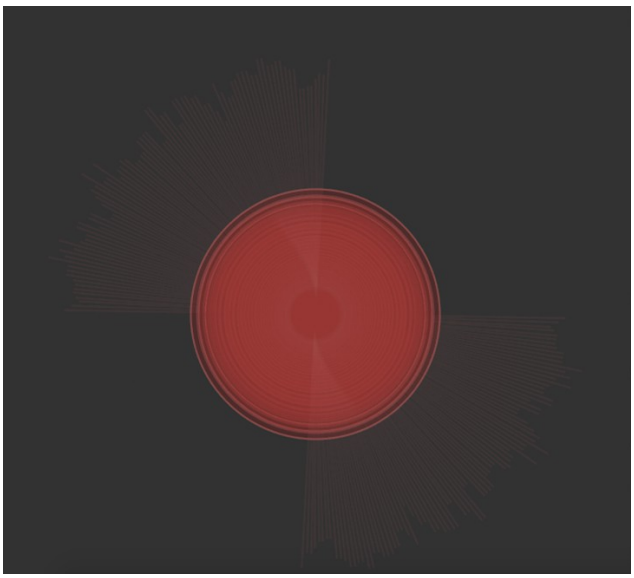


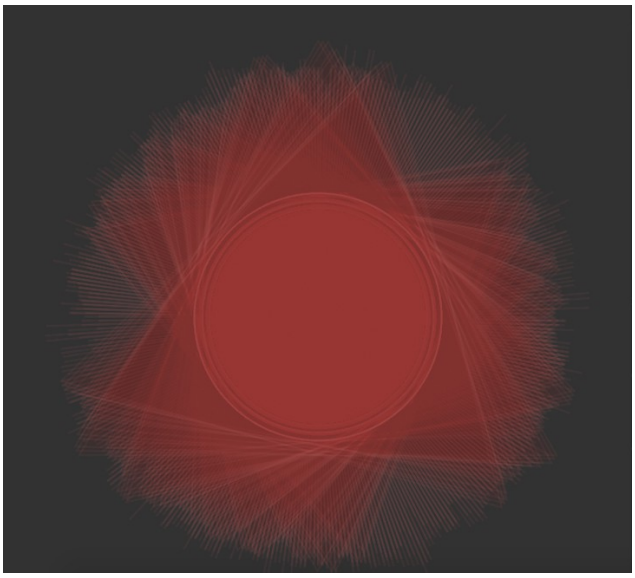


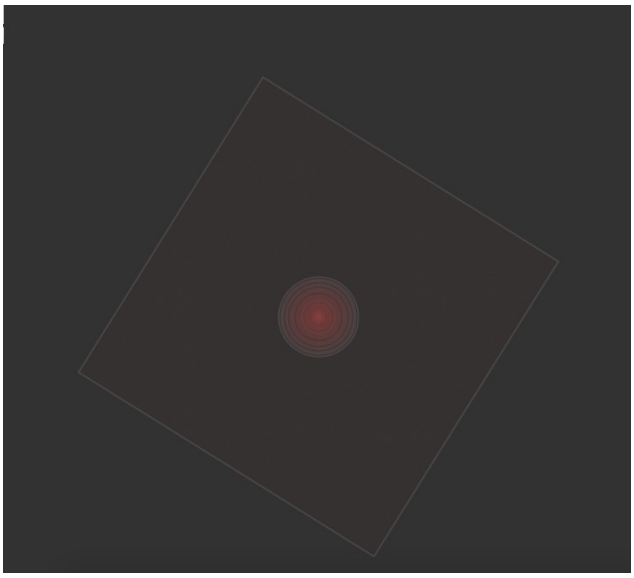


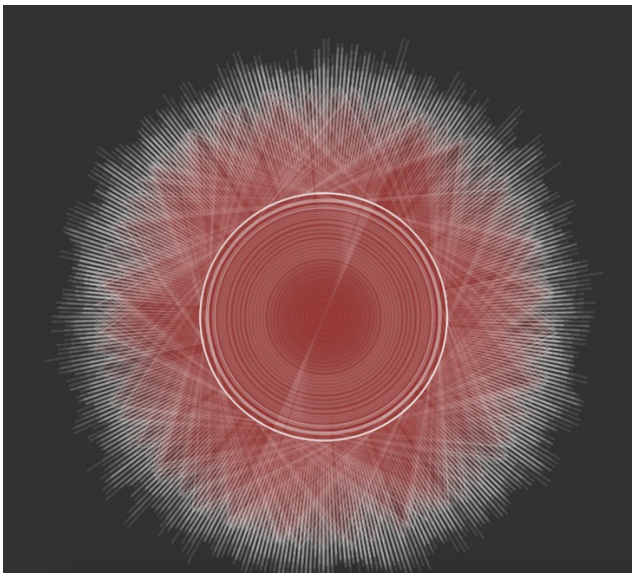


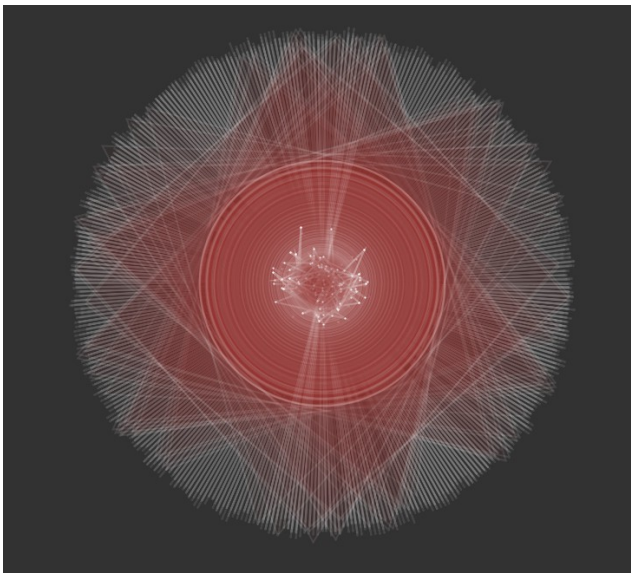


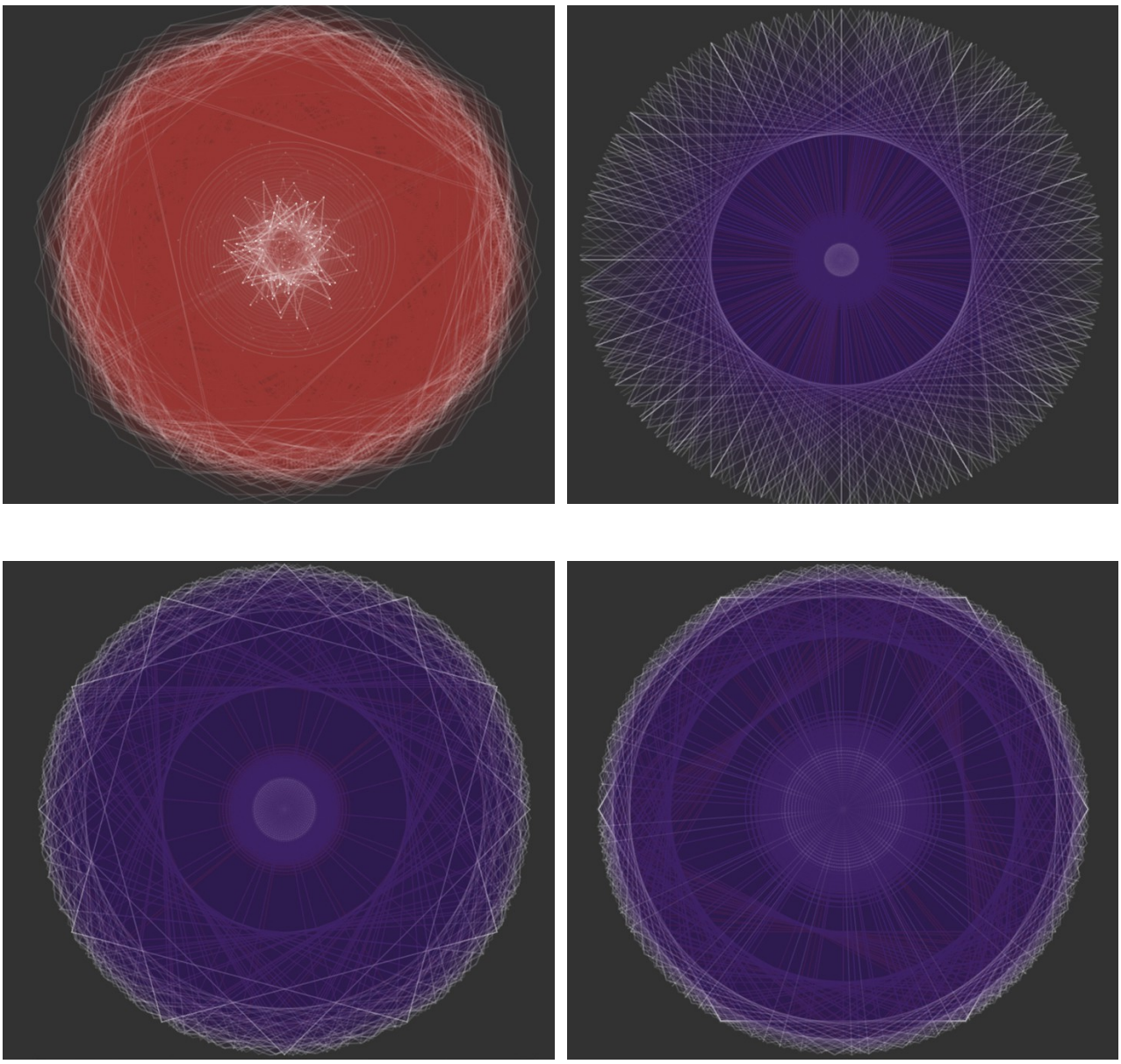












Tutorials:

http://www.creativecoding.org/lesson/topics/audio/sound-in-processing

https://lernprocessing.wordpress.com/2012/06/04/minim-sound-abspielen/

https://processing.org/reference/ArrayList.html

http://code.compartmental.net/minim/

https://www.ee.columbia.edu/~dpwe/resources/Processing/

Generative Gestaltung: Entwerfen. Programmieren. Visualisieren. Mit internationalen Best-Practise-Beispielen, Grundlagen, Programmcodes und Ergebnissen (2009)