CLINA is a sample-based granular synthesiser with a built-in 8-step sequencer that generates grains in loose rhythmic patterns. The name comes from the word „clinamen“, which is a word derived from Latin describing the unpredictable swerve of an atom.

The goal with CLINA was to make a synthesiser that was unpredictable and chaotic enough to inspire the user and transform the source material loaded into the synth, while also being malleable and rhythmic enough to reliably and quickly generate strong melodic and rhythmic motifs.

I have personally found granular synthesisers such as Robert Henke’s „Granulator“ to be quite unintuitive and overly complex to use, so I sought to create something that I could drag into an Ableton project and create interesting sounds with as fast as possible.

This is why I chose to keep both the UI and UX relatively simple and focus my time and energy on designing a handful of features that were impactful and would aid in getting interesting sounds out of any given sample loaded into the synth.

CLINA’s definitive feature is the 8-step sequencer. The sequencer works by generating 8 random values between 0 and 1, scaling those values up to the user-selected range of possible grain starting points (in milliseconds) and then cycling through those generated starting points to create rhythmic patterns. The sequencer’s speed can be controlled with a „density“ knob that divides the current BPM by even numbers.

With a conventional sampler, using this sort of sequencing would result in rigid and choppy patterns, but thanks to varying grain lengths and small deviations in the generated starting positions, the synthesiser still manages to produce ethereal and unpredictable clouds of sound grains while also providing a distinctive rhythmic pulse.  
  
The other main feature is the adjustable grain parameters. There are two sliders that adjust the grain starting position range and length range. The user can highlight which part of the sample to generate the grains from and then adjust the grain lengths to get either erratic and glitchy or softer and more atmospheric results.

The third feature of CLINA is the adjustable settings „volume“, „detune“ and „width“.

They are mainly designed to be there for extra fine-tuning.

The „width“ setting in particular can be fun to play around with. It changes the maximum range of possible stereo positions that each generated grain could be in, letting you choose between a sparse and sporadic effect or a more centred and steadier sounding stream of grains.

This synthesiser was built with the help of Oliver Thurley’s two-part tutorial on YouTube: „Granular Synthesis: Building a granular synth with Max“.  
His tutorial was integral to designing this synth and, in addition to helping me build the core of this synthesiser, helped me to understand the core concepts behind granular synthesis that I am now able to apply to my future projects. Using his synthesiser as a base, I added some additional features to design a synthesiser that is suited to my personal needs in making electronic music, resulting in a musical tool that I could incorporate into my own creative process.