Midi creation

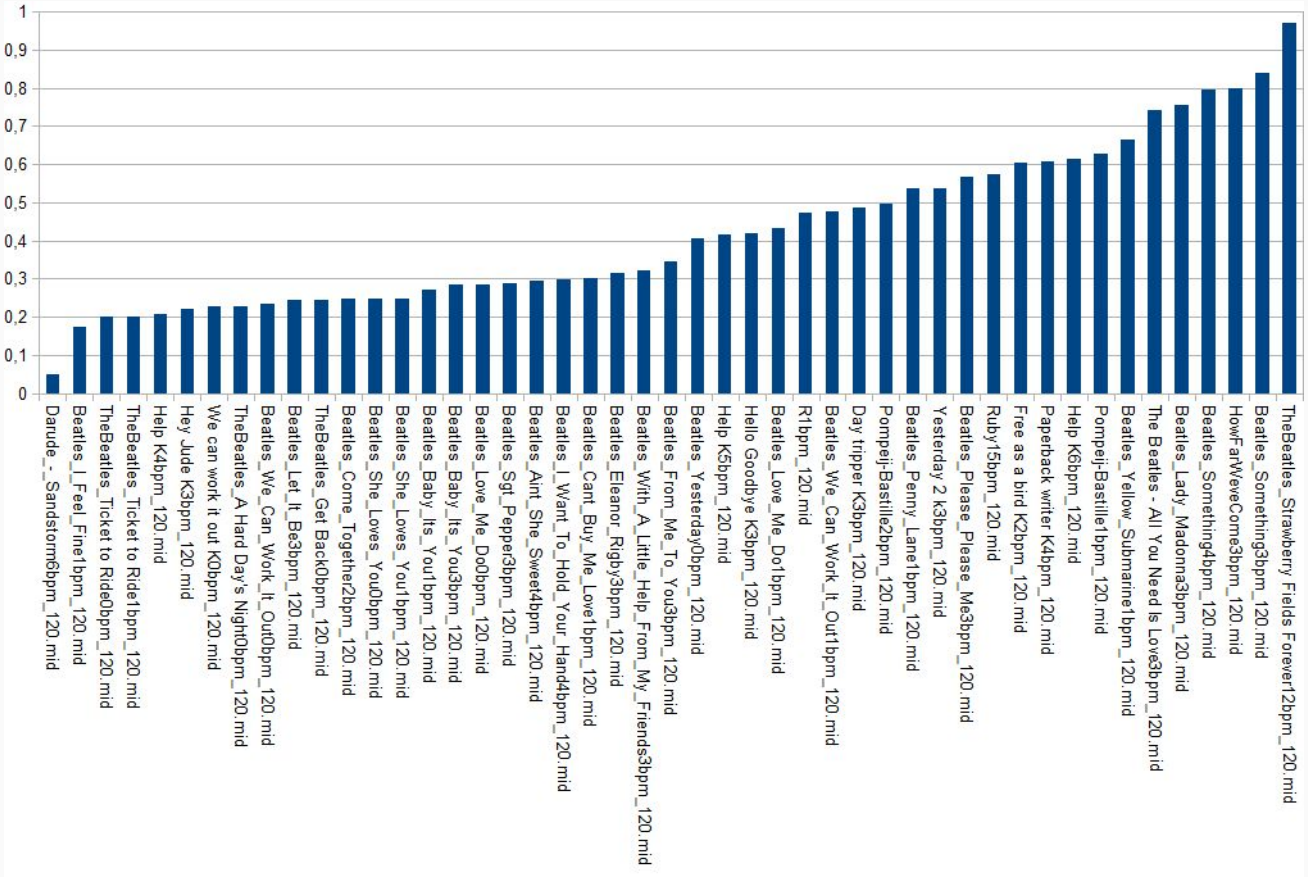
“Without music, life would be a mistake” — Friedrich Nietzsche

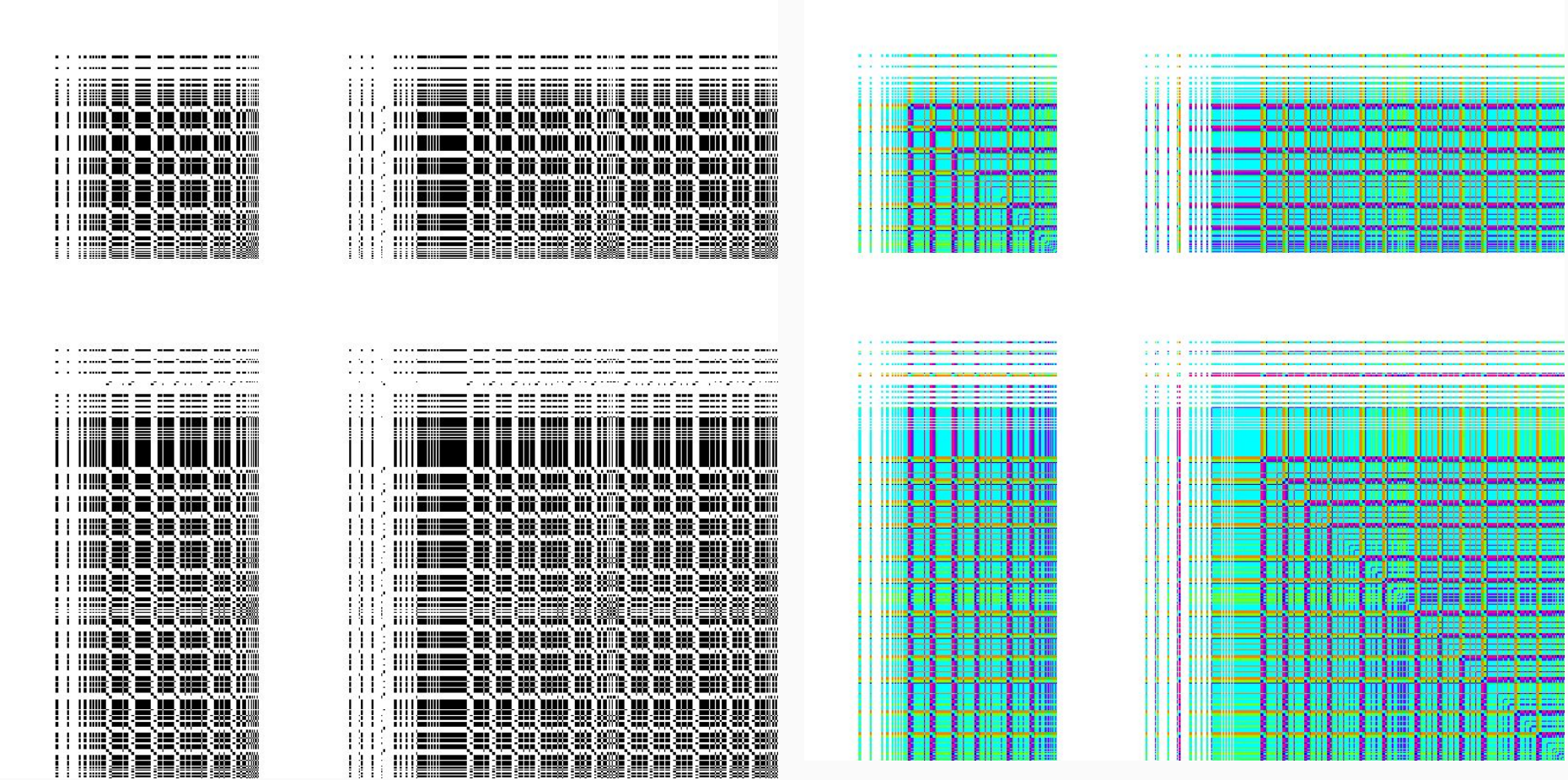
Inspiration

Im mostly inspired by this great video of Colin Morris.
He compares different lyrics and their complexity.
Also he creates similarity matrices.
I want to do the same, but with melodies.

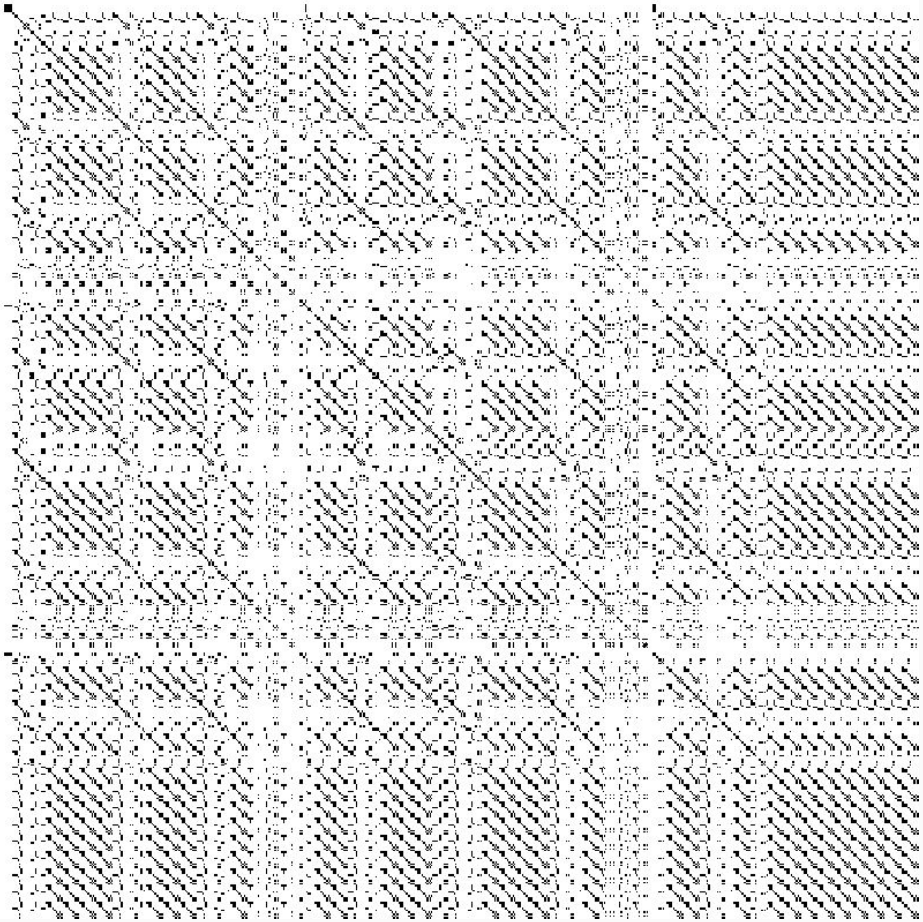
Pop Music is Stuck on Repeat | Colin Morris | TEDxPenn

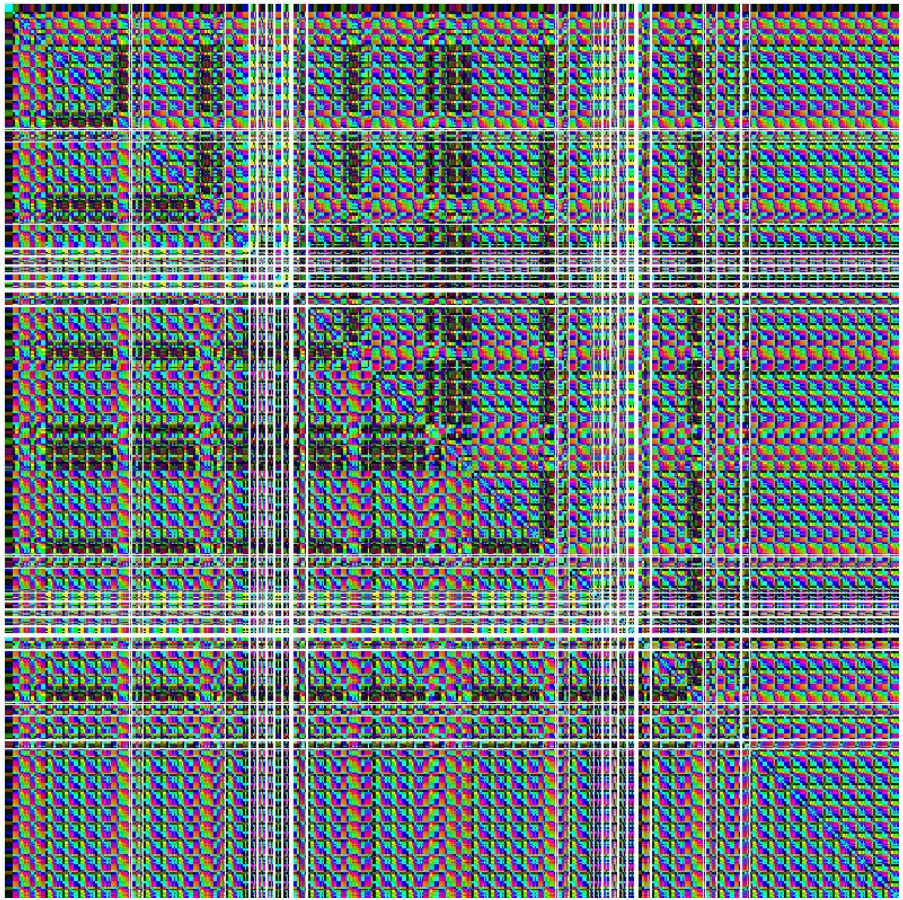
Midi file compressibility comparison



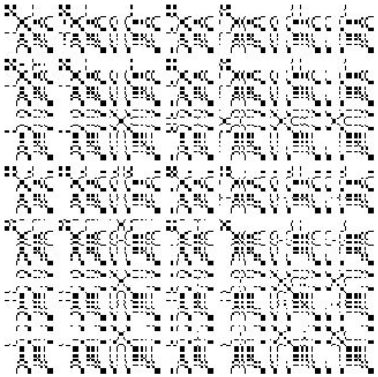
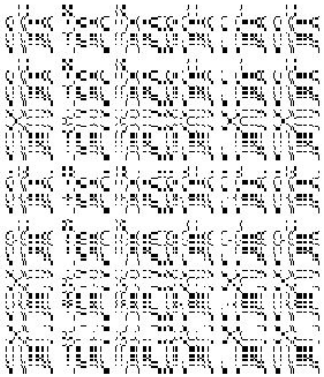
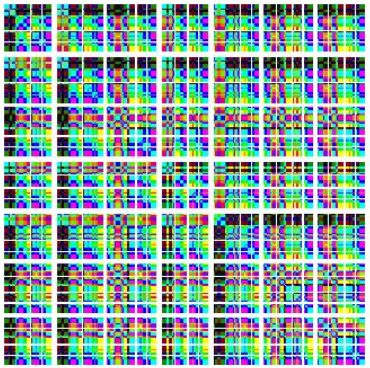
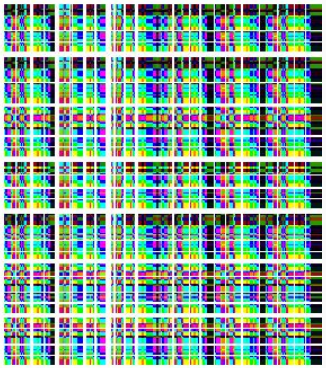


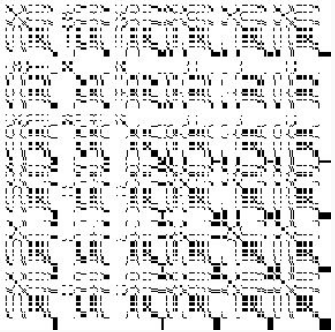
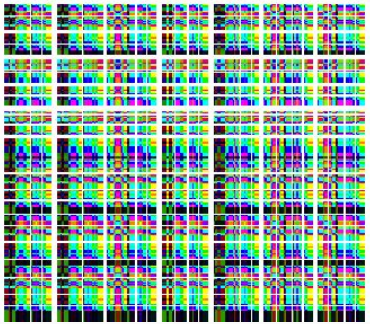
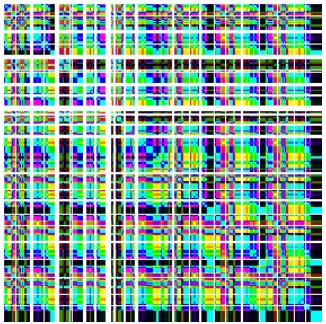
Darude - Sandstorm 5% compression rate



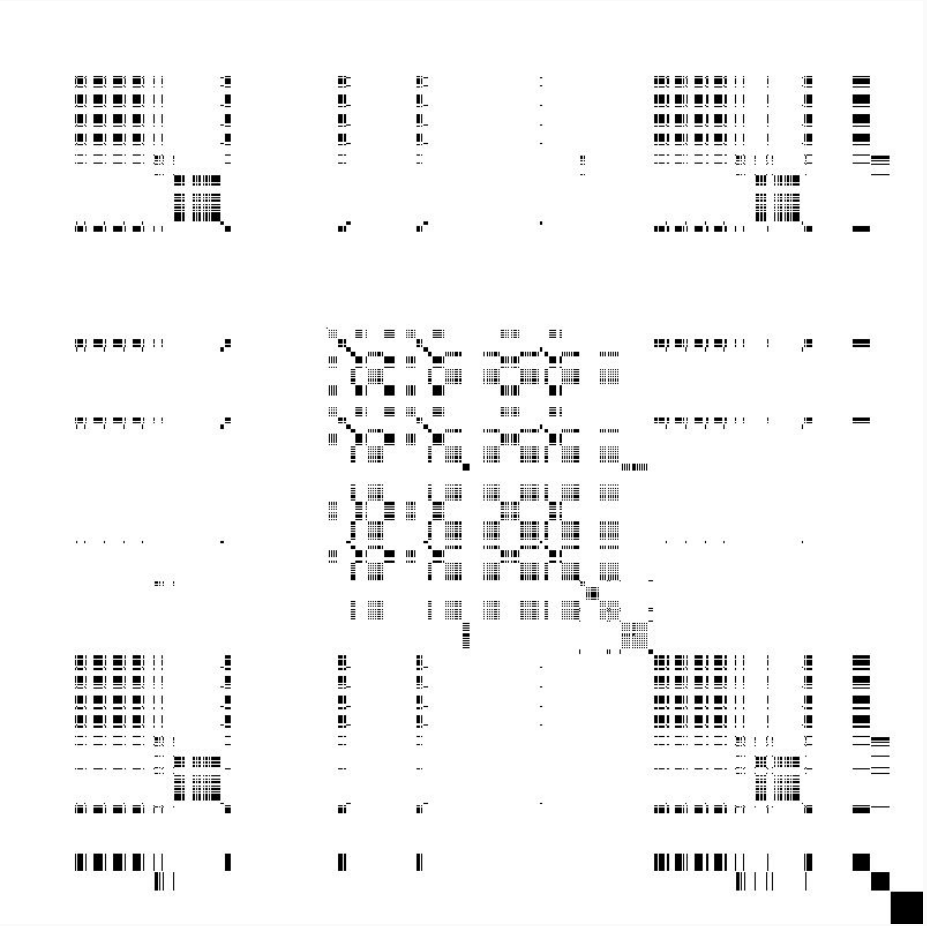


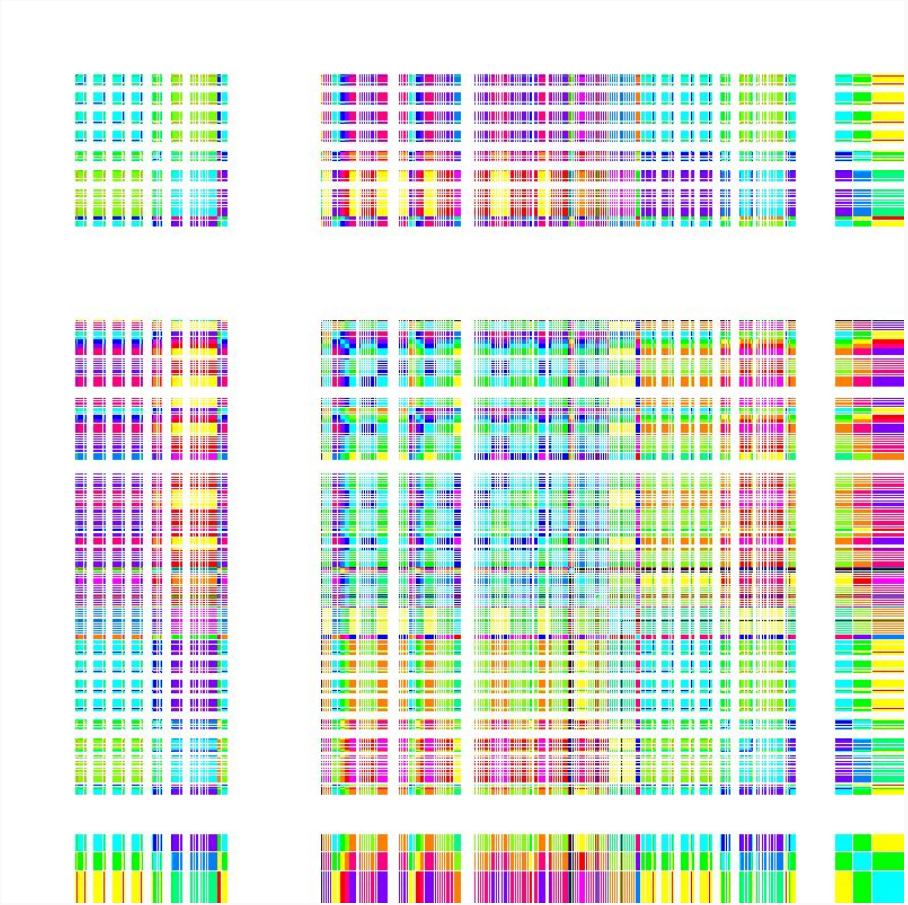
I feel fine (Lead Guitar) 17% compression rate

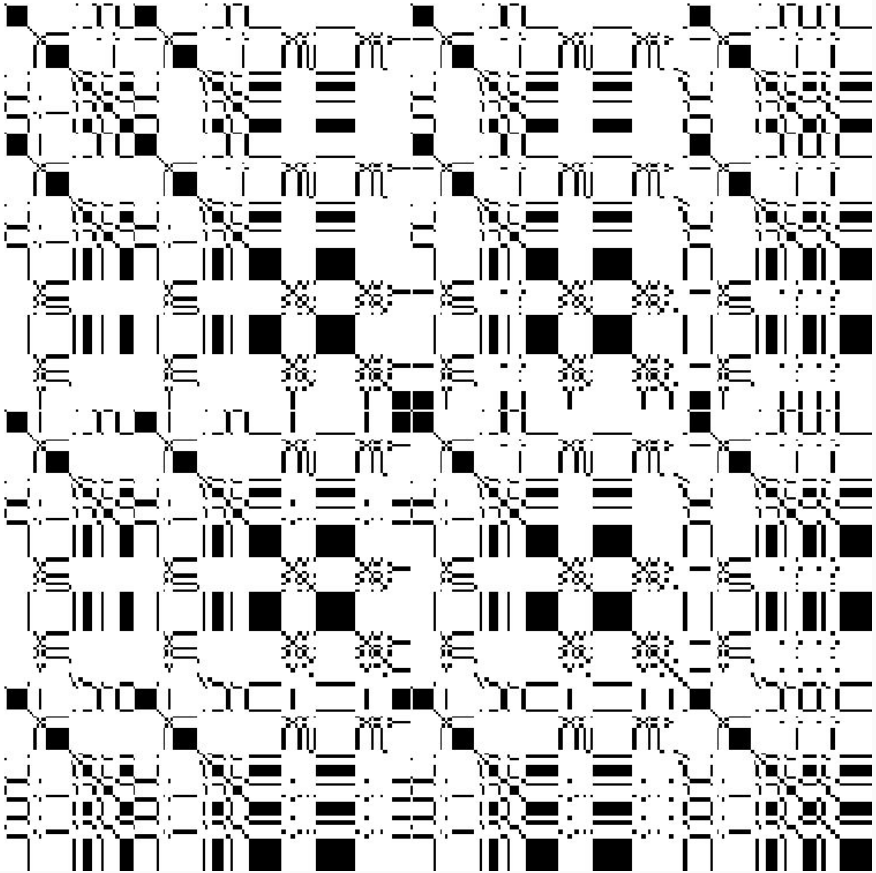




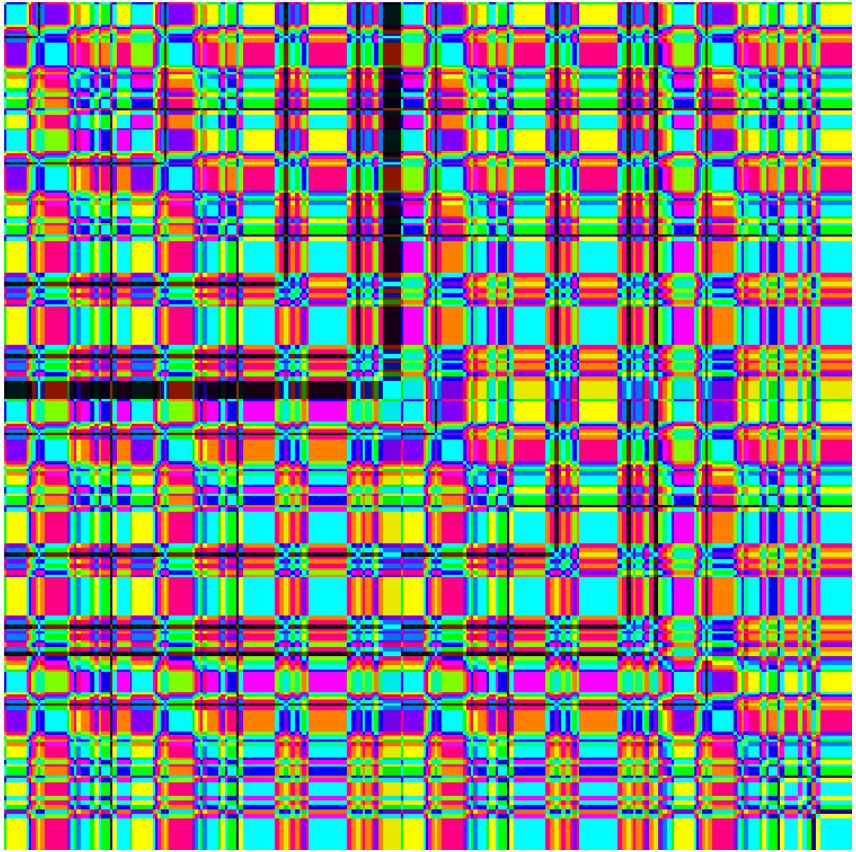
Let it be 20% compression rate



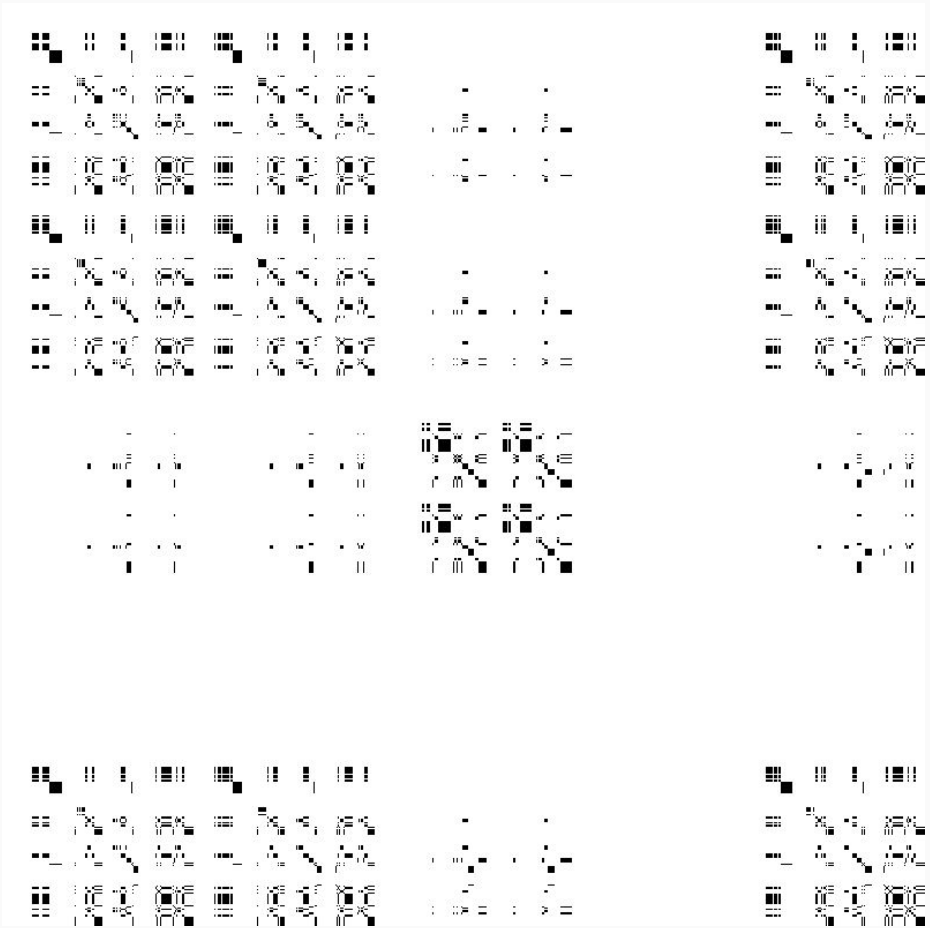


Sgt Peppers 29% compression rate

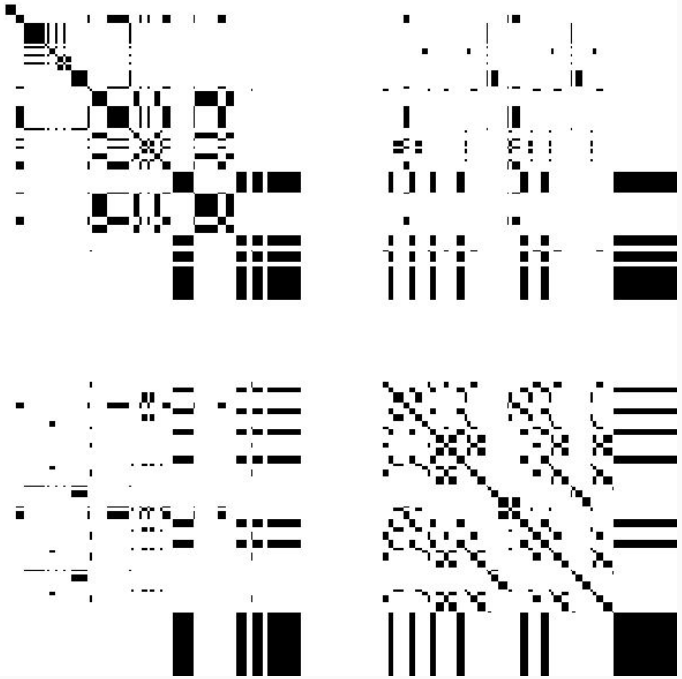


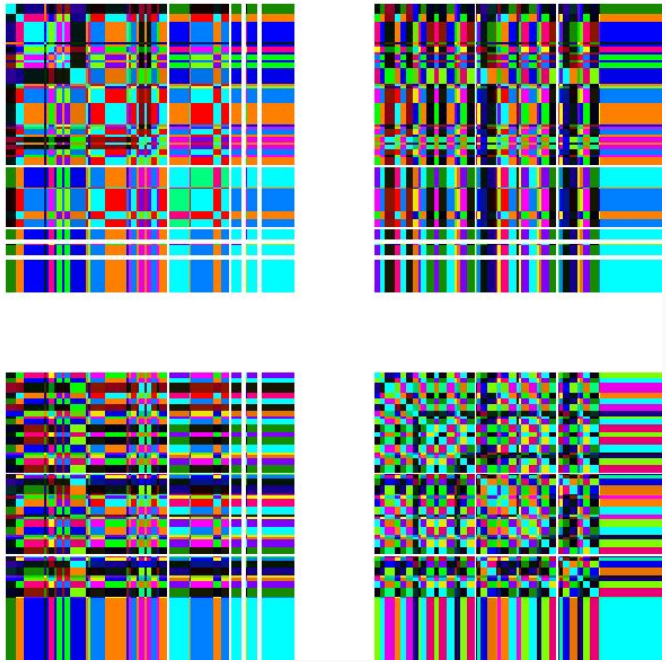


Yesterday 53% compression



Something 83% compression





Strawberry Fields Forever 95% compression

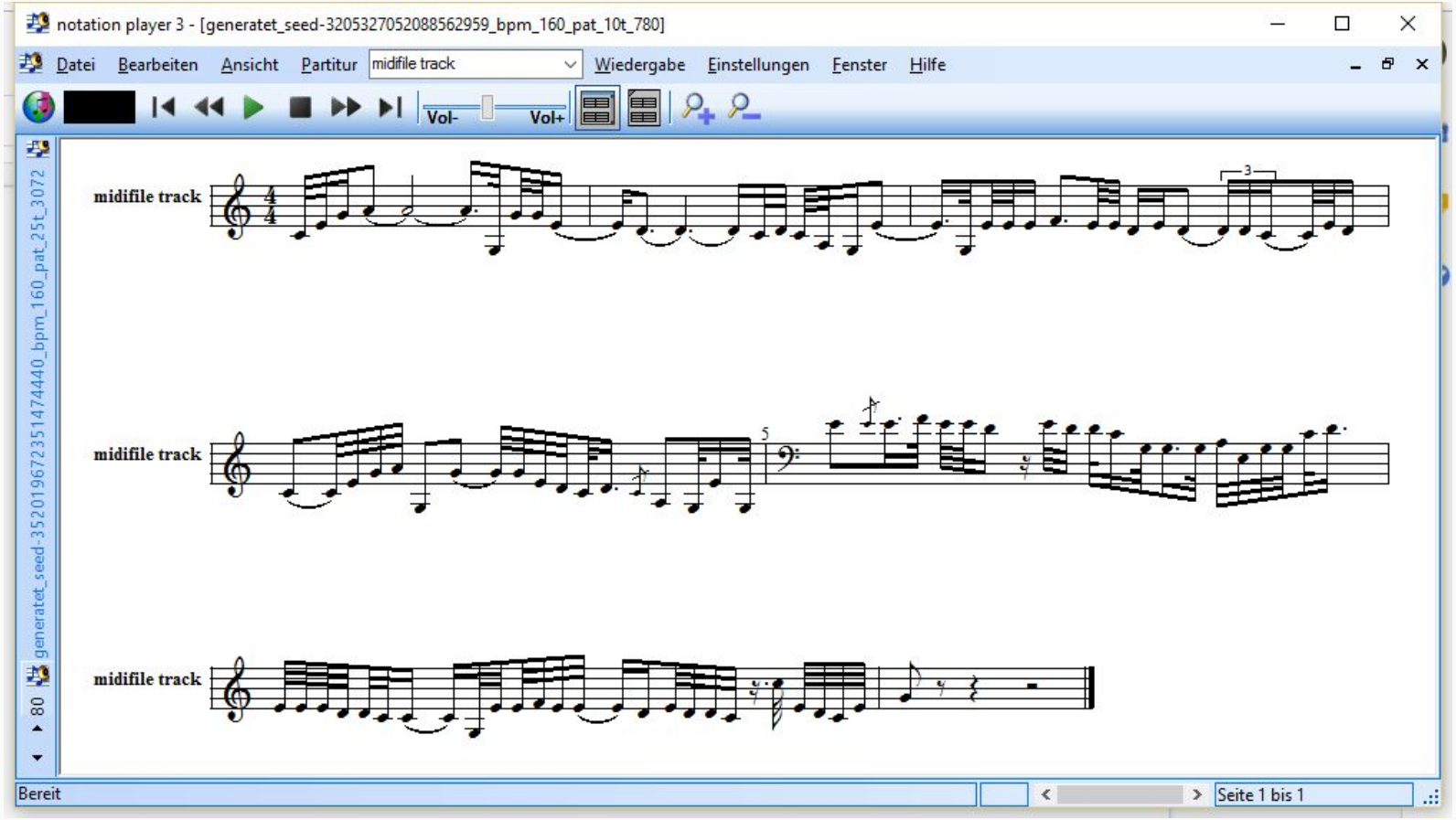
Creation

- The melodies are processed to fill two probability matrices. One for rhythms, one for melody (pitch).
- N-grams.
- Only interesting thing for this pitch:
  Hashmap of List of Integers works.
  Hashmap of Array of Integers don’t.
- It former compares the content, later the identity (memory location)

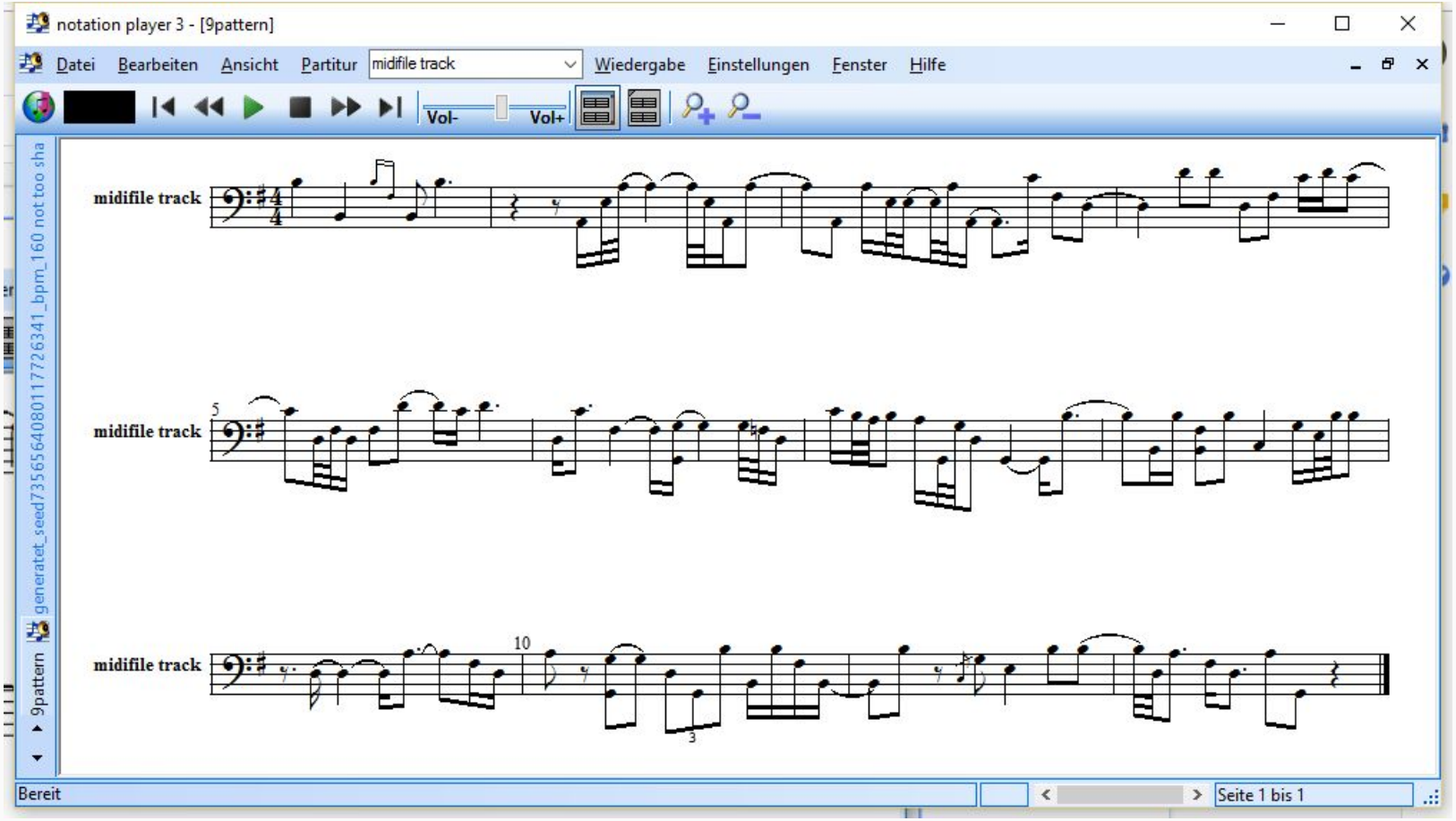
It Works...

Sometimes...

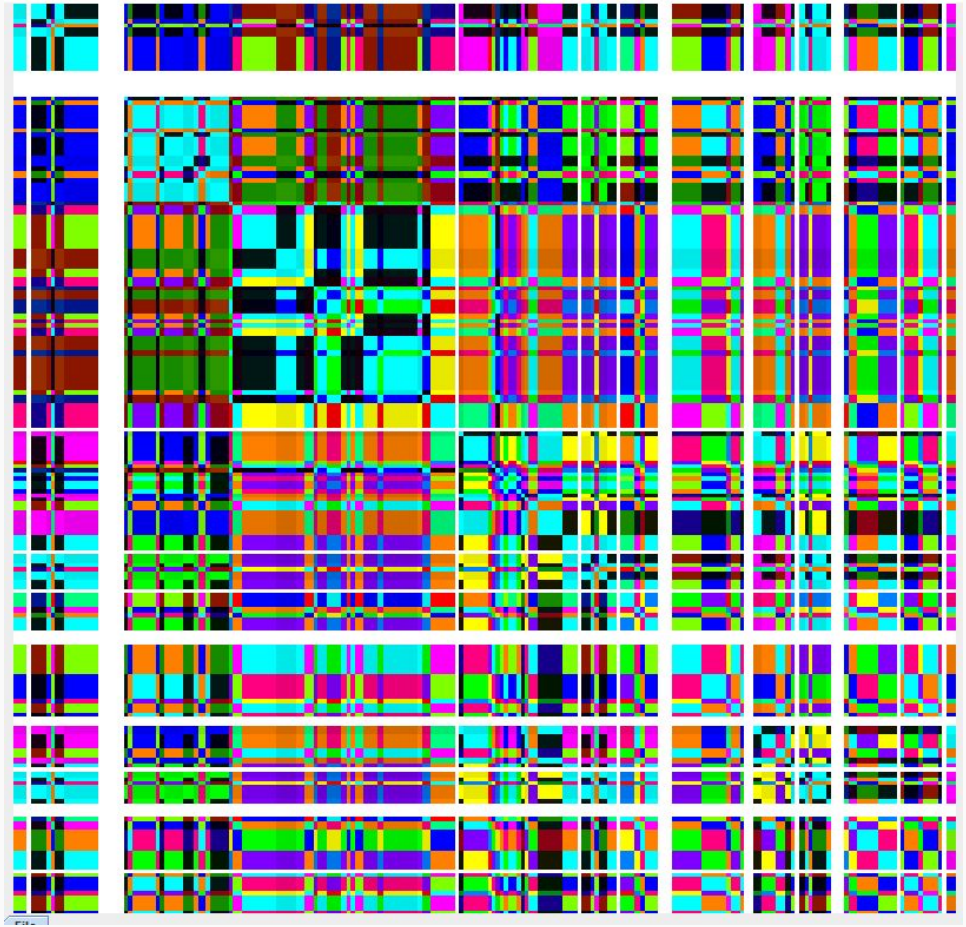
If you like Jazz



Patternsize 10



Patternsize 9



Patternsize 9

Now I close the slides
and play the last piece