



Soundscape: Situated Memory in the Natural World

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Audio Style Transfer

Natural Sound with Piano as Style

Content

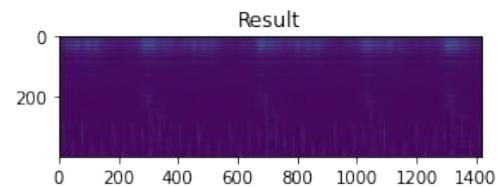
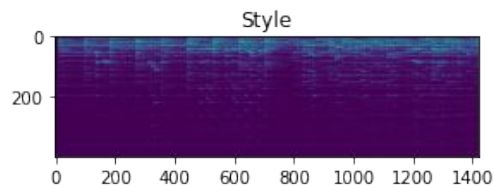
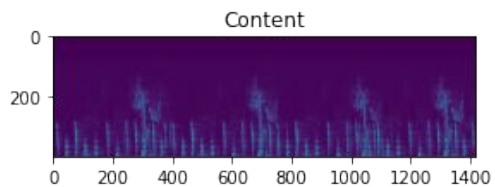
-  birds singing
-  campfire
-  heavy rain
-  wind



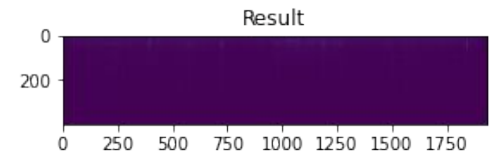
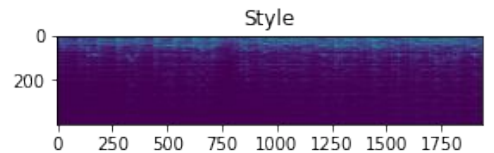
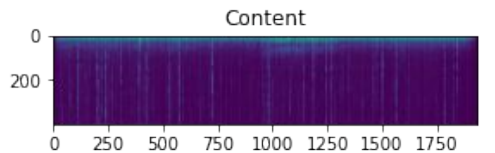
Generated Music

-  birds singing (piano)
-  campfire (piano)
-  heavy rain (piano)
-  wind (piano)

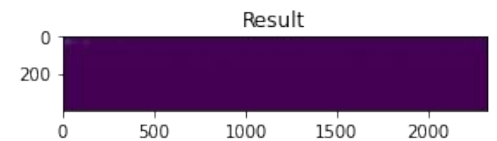
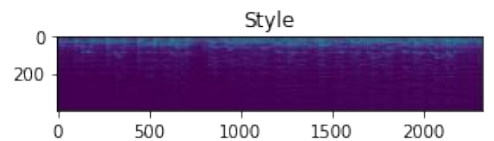
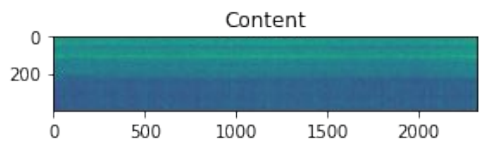
birds singing



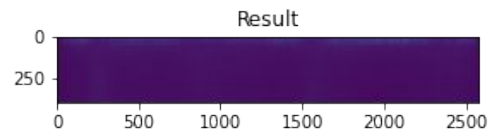
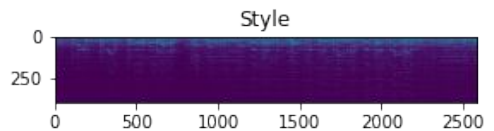
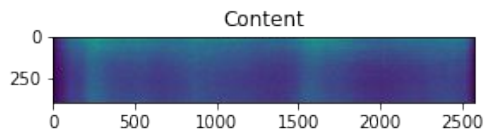
campfire



heavy rain



wind



Natural Sound with bamboo flute as Style

Content



birds singing



campfire



heavy rain



wind



Generated Music



birds singing (flute)



campfire (flute)

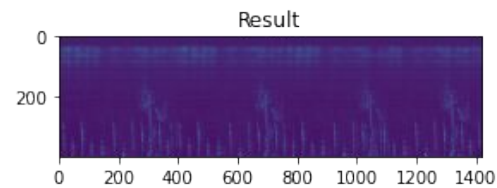
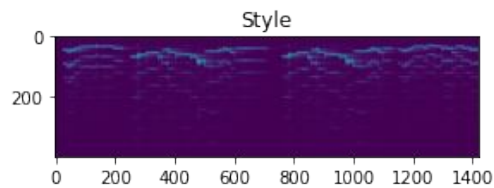
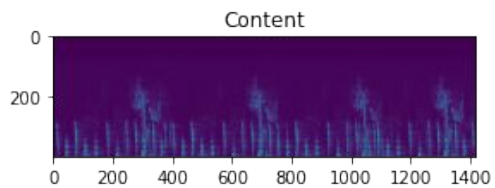


heavy rain (flute)

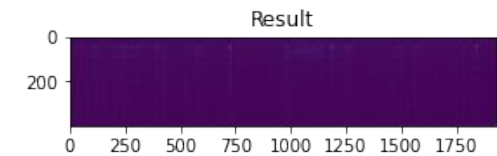
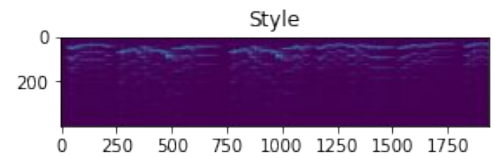
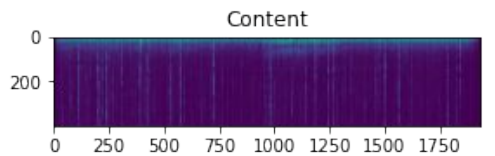


wind (flute)

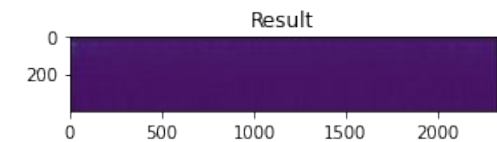
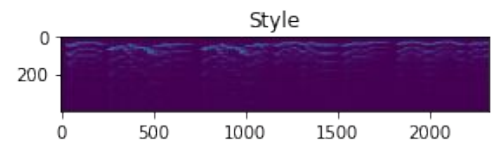
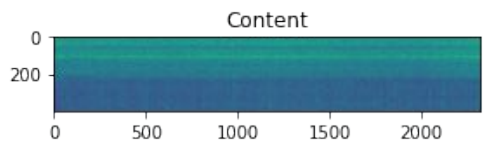
birds singing



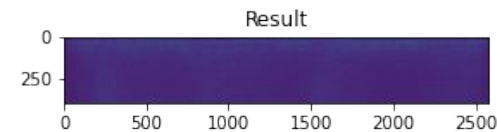
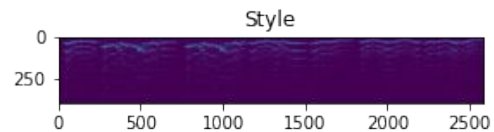
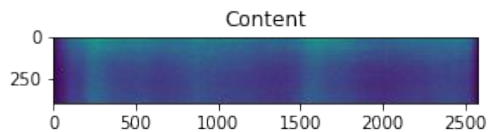
campfire



heavy rain



wind



Natural sound texture with music Rhythm

Style

Content

Result



Rain



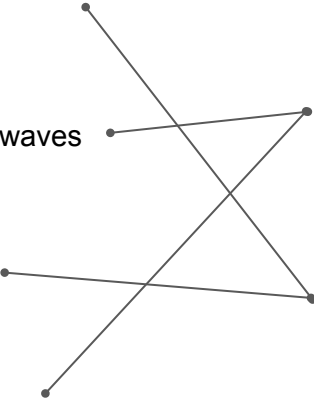
Ocean waves



Birds



Leaves



Short Piano



Long Piano



Short x leaves



Long x rain



short x waves



Long x birds

Sub tuning with Alpha Channel

Style



Ocean waves

Content



Short Piano

Alpha



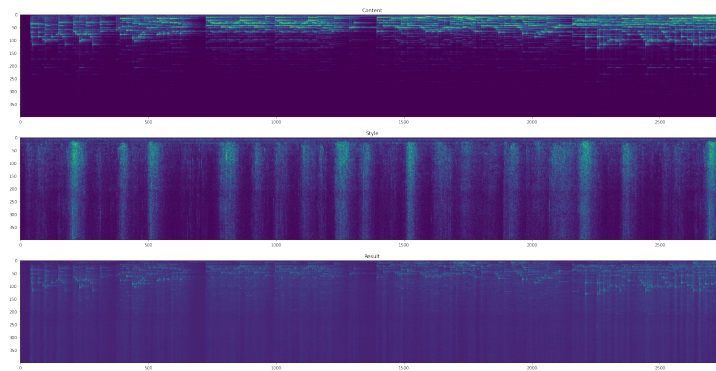
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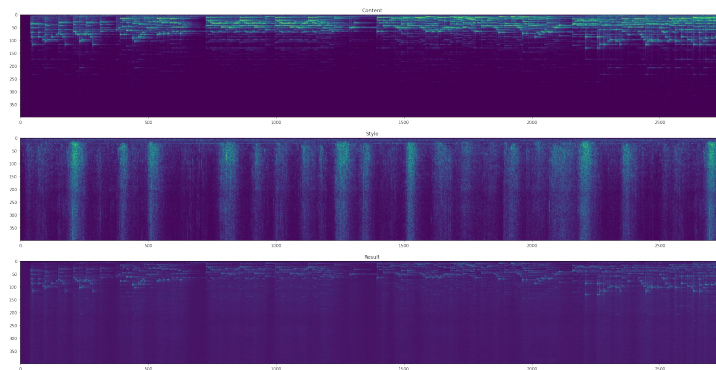
0.06



0.02



Same Weight in Content Loss and Style Loss



Half Weight in Content Loss and Double Weight in Style Loss

Music Visualization

Marching up the trail in the
woods, one cuddled by misty
air as golden lights pierce
through the leaves.

On the tip of the hill you see
the horizon open, the glitter on
the sea turns from gold to clear
white, and the first horn blast
from the freighter tears away
the dream that wraps around
you.



Instrument (style) with different Natural Sound (content)



sun x organ



rustling leaves x accordion



ocean waves x piano

Music (style) with different mood (content)



seascape x dreamy



wind through leaves x melancholy



ferry steam x deep



natural environment x mysterious

Music (style) with different instrument (content)



sea-gull



light rain



walking step



sea wave



Ferry



sea-gull + vibraphone



sea-gull + guitar1



sea-gull + guitar 2



sea wave + violin



sea wave + piano



walking step+ xylophone



ferry+violin



ferry+piano1

Music Mixing

0:01:10:00
02100 (30.00 fps)

Source Name

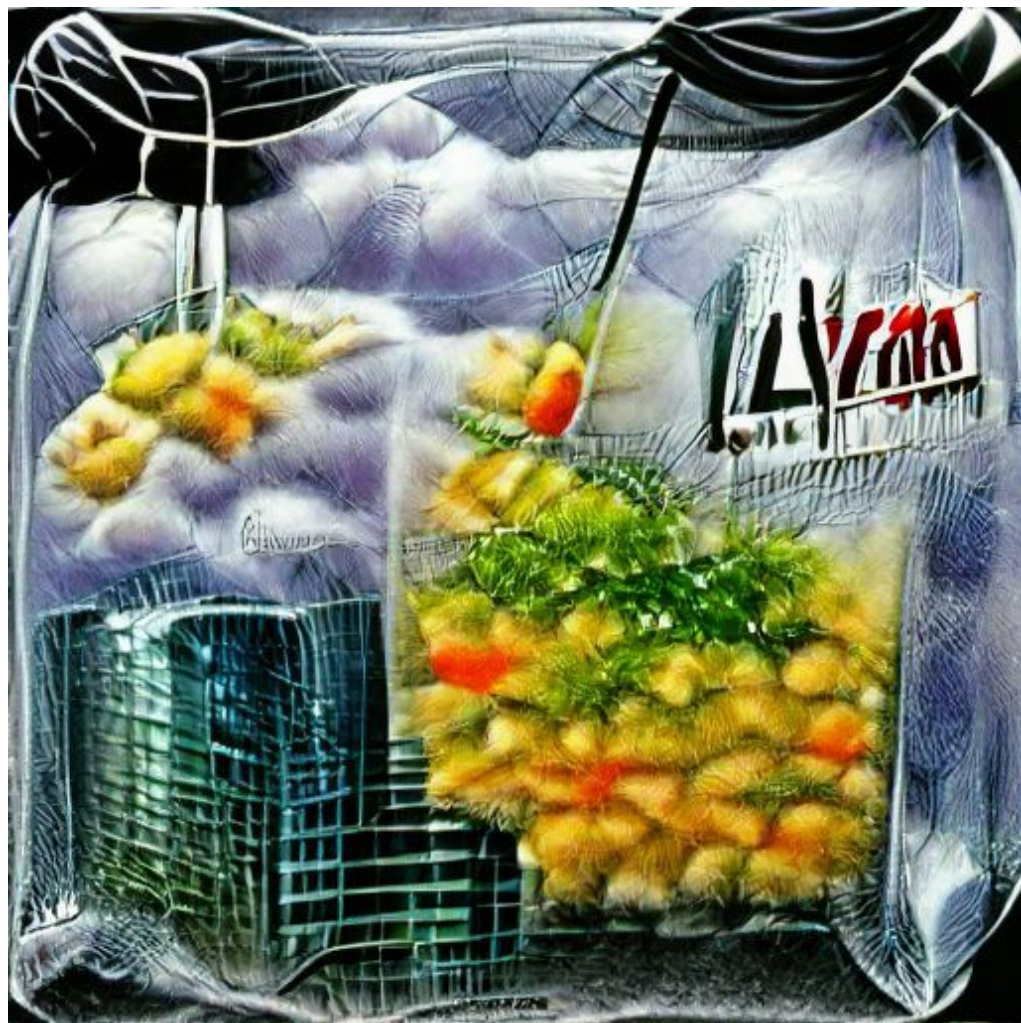
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2	accordion_rustling leaves_alpha0.0001.wav	Parent & Link	None
3	walking step+ xylophone.wav	Parent & Link	None
4	result (1).wav	Parent & Link	None
5	ferry+violin.wav	Parent & Link	None
6	gull + guitar2 .wav	Parent & Link	None
7	sea wave + violin.wav	Parent & Link	None

Timeline

0:00s 00:15s 00:30s 00:45s 01:00s 01:15s 01:30s

Final Music





wav2clip