

# *Portfolio*

*Atsuya KOBAYASHI*

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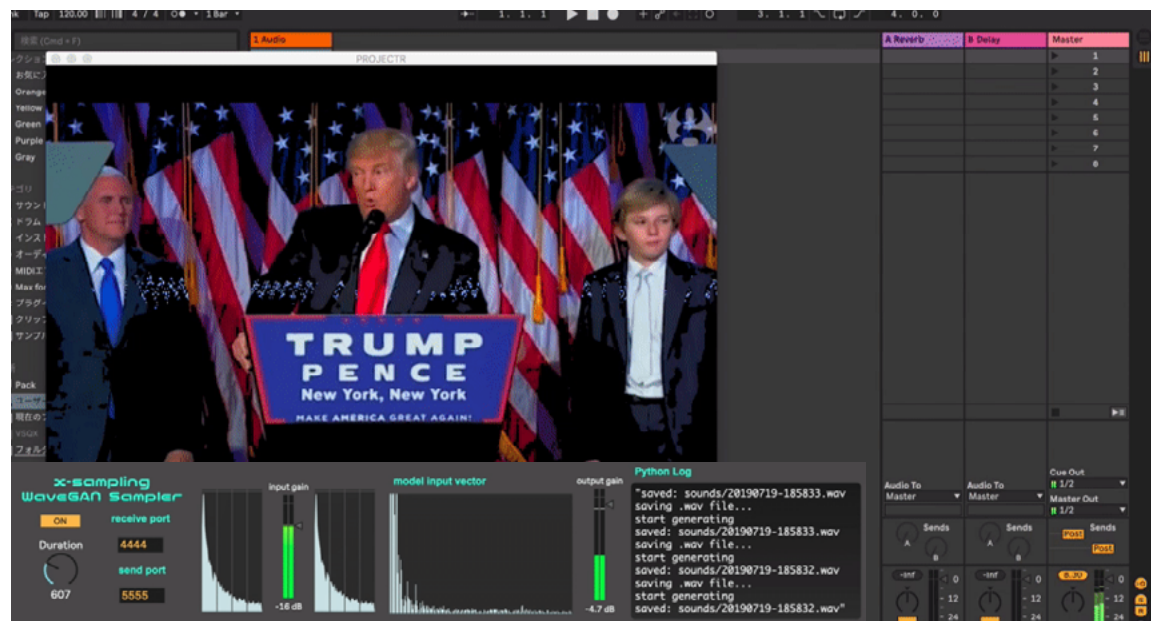
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Keio University SFC Computational Creativity Lab.

<https://www.atsuya.xyz/>

# Sample Sound Transforming with Generative Adversarial Networks

2019 Spring / Atsuya Kobayashi (System) + Reo Anzai (Sound Design)



The system uses a WaveGAN, which is Generative Adversarial Model applied to generate sound wave data, to convert the input voice into "bird calls", "piano sound" and "other people's voices" in real time.

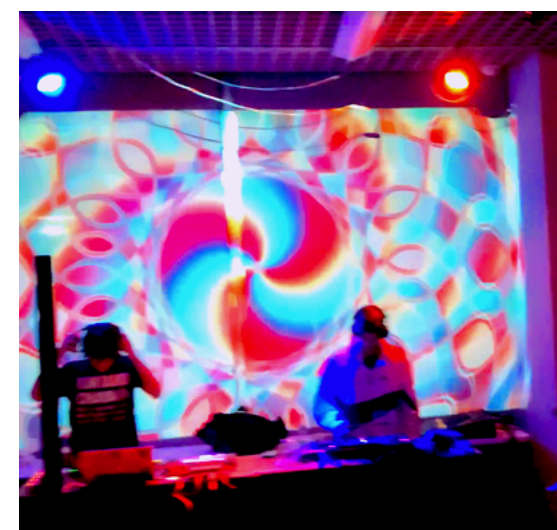
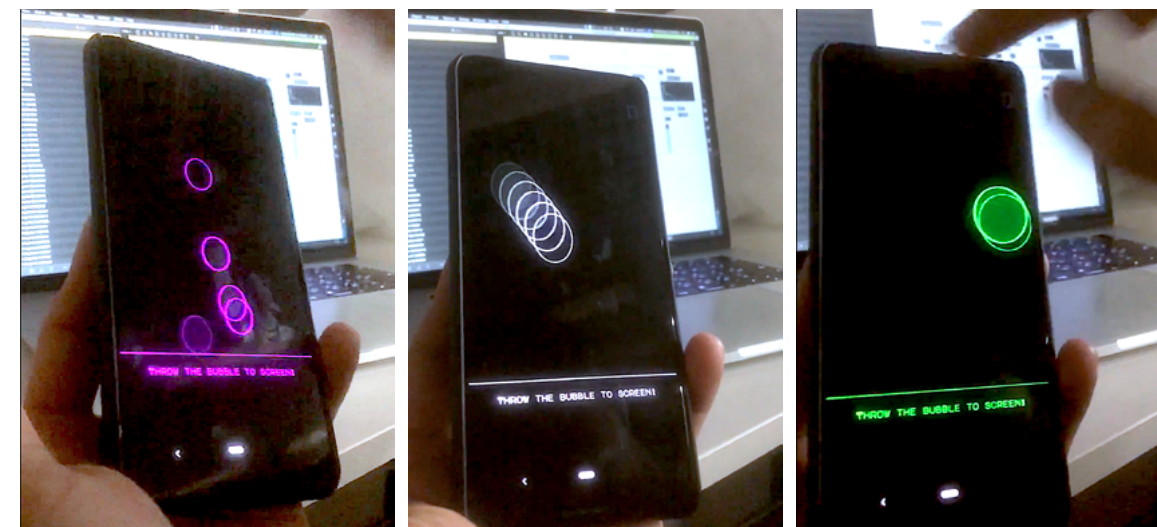
Integrated with Ableton Live and Max, this Python system for Transforming with GAN models is able to be used for sound expression and performance, installation.

In the exhibition at LIQUIDROOM KATA, the voice of Donald Trump's majestic speech was transformed into a cute little bird call.

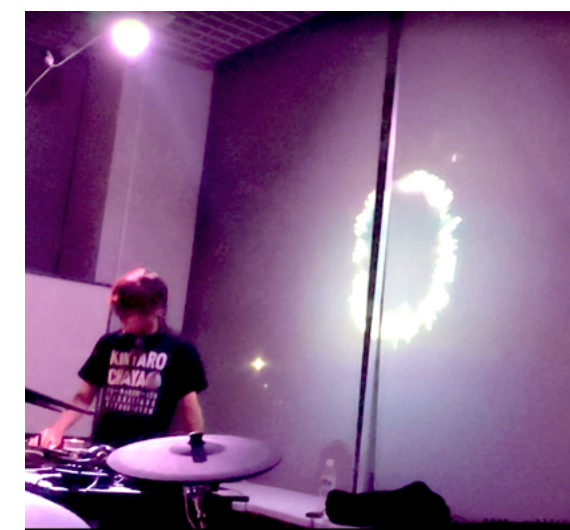
For the exhibition at the university, the visitor's real-time voice was transformed into a piano tone and played back with a beat.

# Web Application for Interactive Music Performance

2019 Summer / Atsuya Kobayashi (System) + Reo Anzai (Music)



This Web application based system allows the audience to participate in live music performances and DJ performances. When the audience accesses the QR code presented by the performer, they can interact with the "bubble interface". By popping the bubbles on the screen, sounds corresponding to the color and size of the bubbles are emitted along with music performance.



We performed demonstration at X-Music Night, a music event held at Keio University SFC. In the section where the sound was reflected by the audience's participation, the audience was able to use their own smartphones to make reflection sounds by flicking the bubbles, and create the performance together.



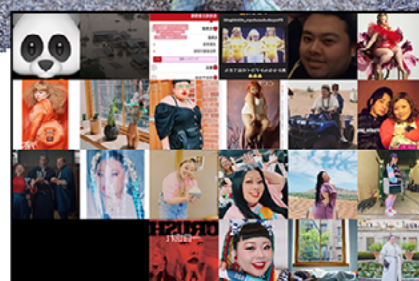
# MemoryBody "Wearing Digital Memories"

2019 Summer / Atsuya Kobayashi (System and Demo)

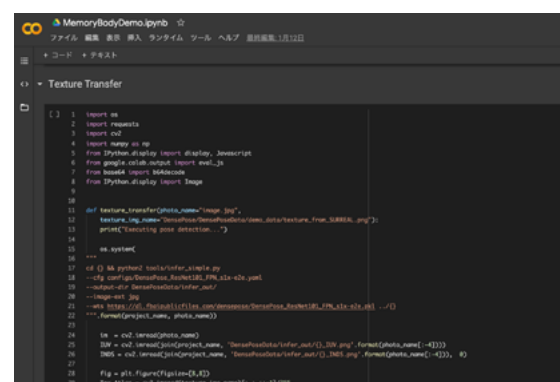
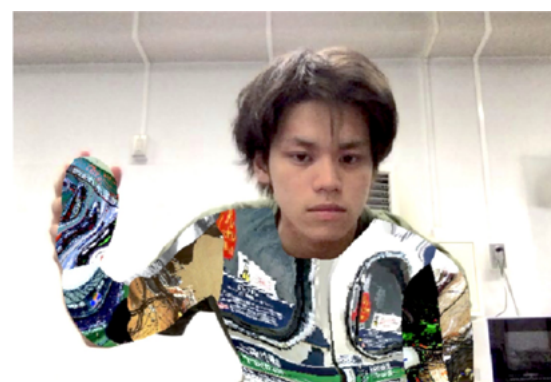


Pose Estimate

Texture Transfer



Wearing Instagram Photos



This work "MemoryBody" expresses the state in which one's own body has been hijacked by virtual images on a social networking service by dressing one's own Instagram posts (memories) on one's own photo (body).

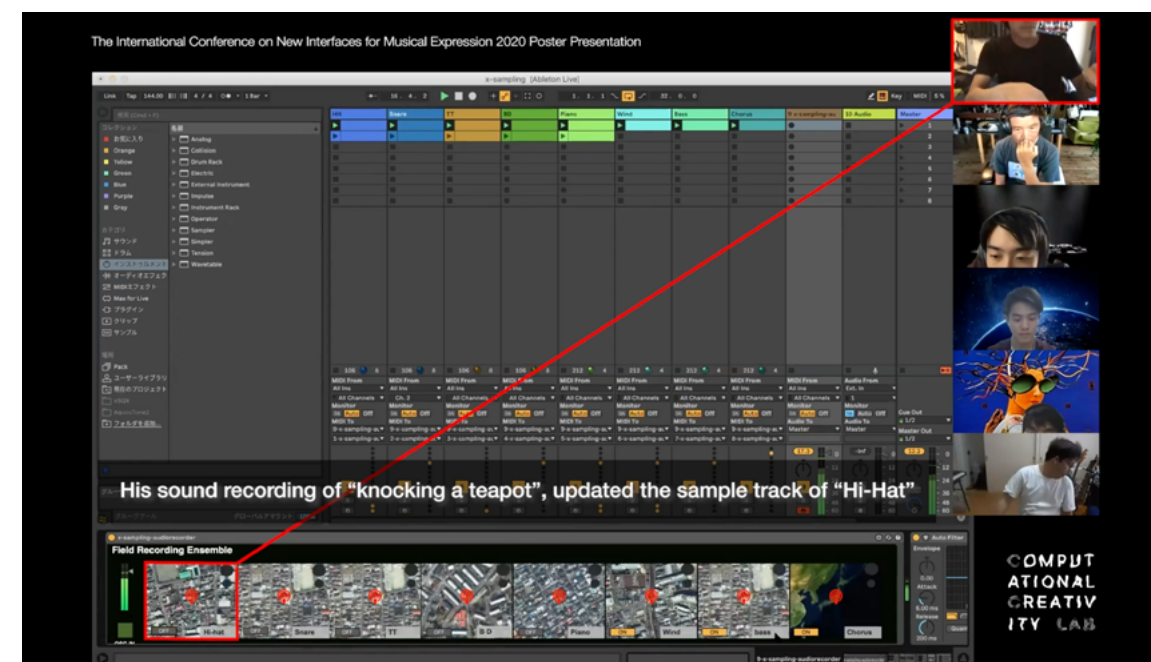
But, unexpectedly, when we try this on famous talent's account, it seems like cool dress. This work can potentially adopt to design of clothes on virtual reality space.

The system uses DensePose for pose estimation and prediction of the UV coordinates of the body surface in order to generate a photo of the user wearing an image. User's photos posted to instagram are automatically collected.

The entire system is designed to run on Google Colaboratory and anyone can try it out.

# ExSampling: Real-time Field Recording Ensemble Performance

2020 Winter / Atsuya Kobayashi (System) + Reo Anzai (Music Performance)



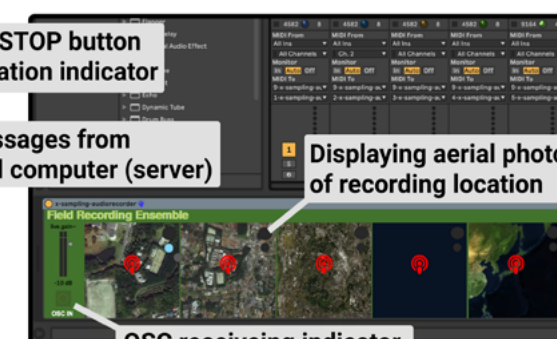
Web Recorder

Max for Live Device



START/STOP button and duration indicator

Log messages from the local computer (server)



Displaying aerial photo of recording location

OSC receiving indicator

We proposed an integrated system of recording application and Deep Learning environment for a real-time music performance of environmental sounds sampled by field recording. Automated sound mapping to Ableton Live tracks by Deep Learning enables field recording to be applied to real-time performance, and create interactions among sound recorders, composers and performers.

In this situation of the coronavirus, we demonstrated an online session.

Sounds recorded by distant participants with their smartphones were sent to the host PC, where music It becomes part of the performance and acts as an instrument.

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