

# MBET Senior Project: Final Presentation

Jonah Pfluger

# What was the project? And how did I spend my time?

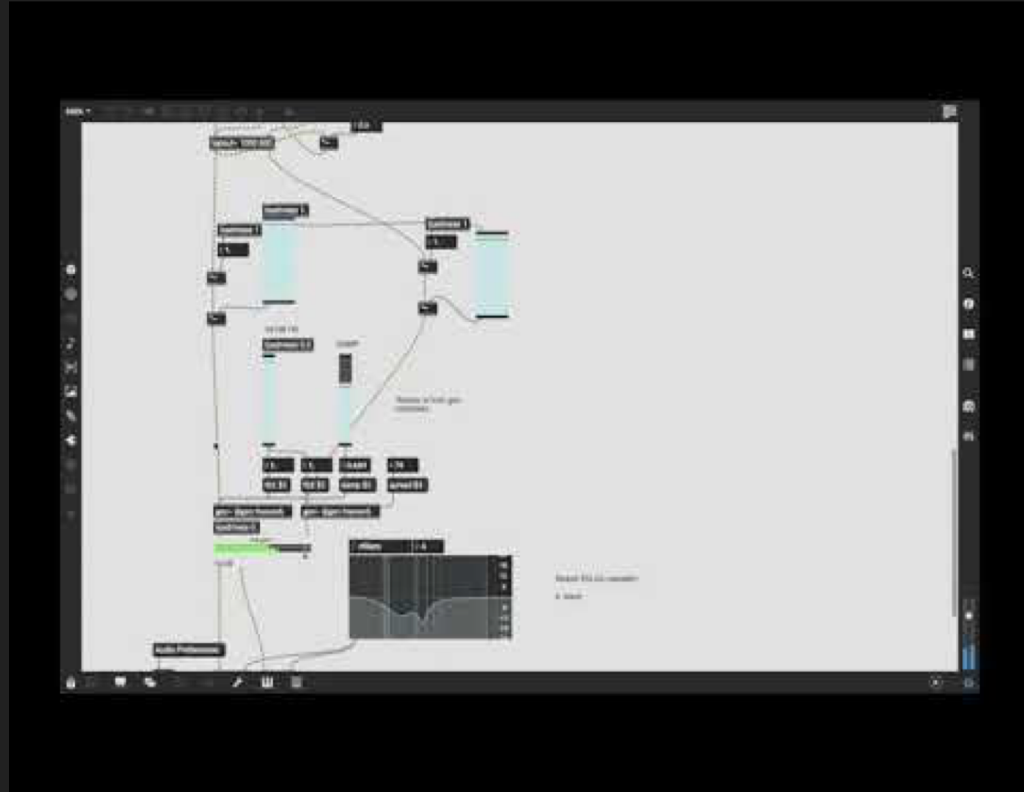
- The core of this project centralized around two main areas of focus:
  - The designing and building of custom audio software in Max/MSP and SuperCollider
  - The organization, promotion, and performance of a concert event that utilized these custom audio tools in a free improvised setting alongside other instruments
- Regarding “MBET”:
  - The former part of the project addresses “Technology”
  - The latter part (most directly) addresses “Business”
    - Also addresses “Technology” as I undertook various technical tasks in the setup process such as: setting up a quadraphonic speaker system for synthesizer playback, setting up a separate stereo system for vocal playback/monitoring, and other tasks standard to “live event production”

# Max/MSP vs SuperCollider

- To develop the various audio tools/software instruments I heavily utilized Max/MSP and SuperCollider.
- Max is a visual programming language whereas SuperCollider uses a language derivative of C++ called “sclang”
- All Max projects eventually were built out into graphic user interfaces, 1/2 of SC projects were (with the other 1/2 having a “live code” style workflow)
- Ultimately, both were extremely useful but are simply different and, therefore, better at different tasks

# The instruments... (part 1)

- Max instrument: Generative Ambient Console
- Expanded class project based on generative ambient "drone", good for Eno-esque textures, or a ghostly electronic Tanpura-esque sound.





# The instruments... (part 2)

- Max/MSP Instrument: Paraphonic Motion Synthesizer
- Sequencer based instrument, that can also be played as a monophonic (paraphonic w/ delays) synthesizer



# The instruments... (part 3)

- Max/MSP Instrument: Random Multi Timbral Synthesizer
- FM (actually PM, but this is a historic misnomer) based synth with bound random quantization and (relatively) complex enveloping



# The instruments... (part 4)

- Max/MSP Instrument: Glitch/Drone Organ
- Synth enabled for musical typing and showcasing a freaky delay line; good for drones and glitched chords



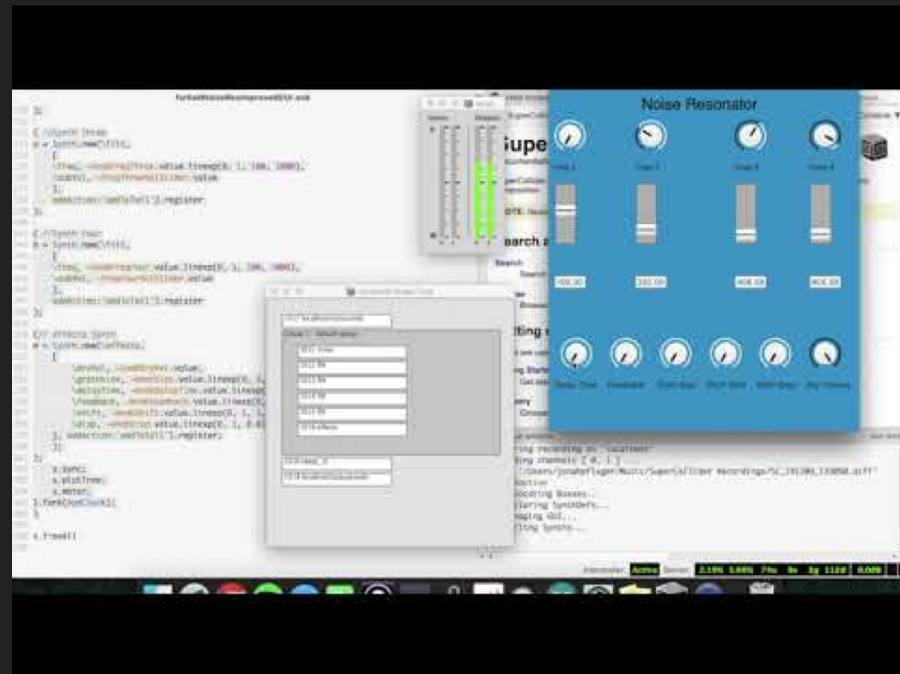
# The instruments... (part 5)

- Vocal Processor
- Environment for processing input signal; originally conceptualized as "for voice" but truly can be used for any input signal



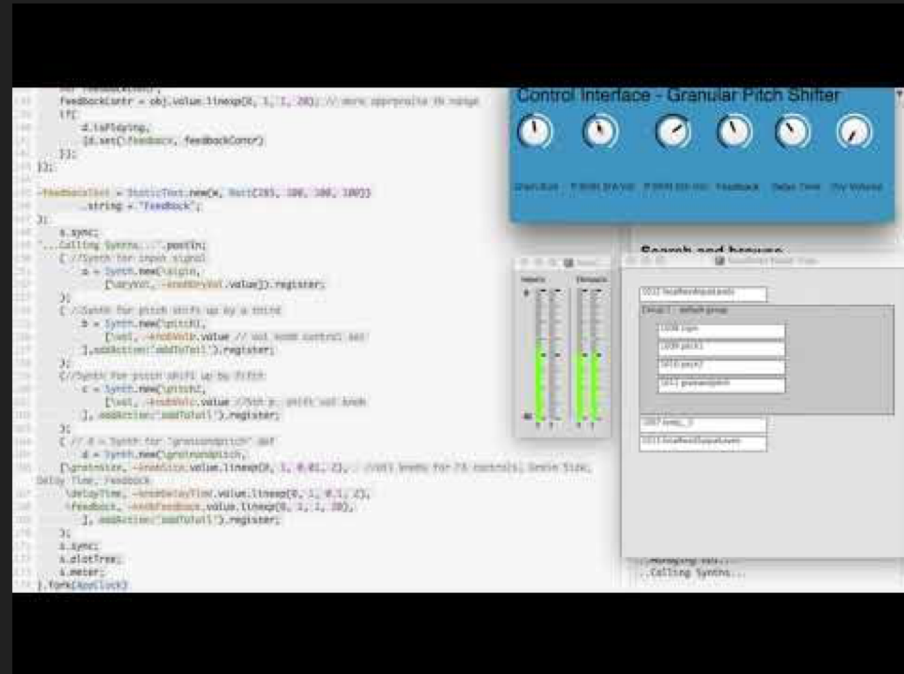
# The instruments... (part 6)

- SuperCollider Instrument: Noise Resonator
- A drone instrument based on filtering pink noise with an extreme Q factor in order to generate "pure" tones.



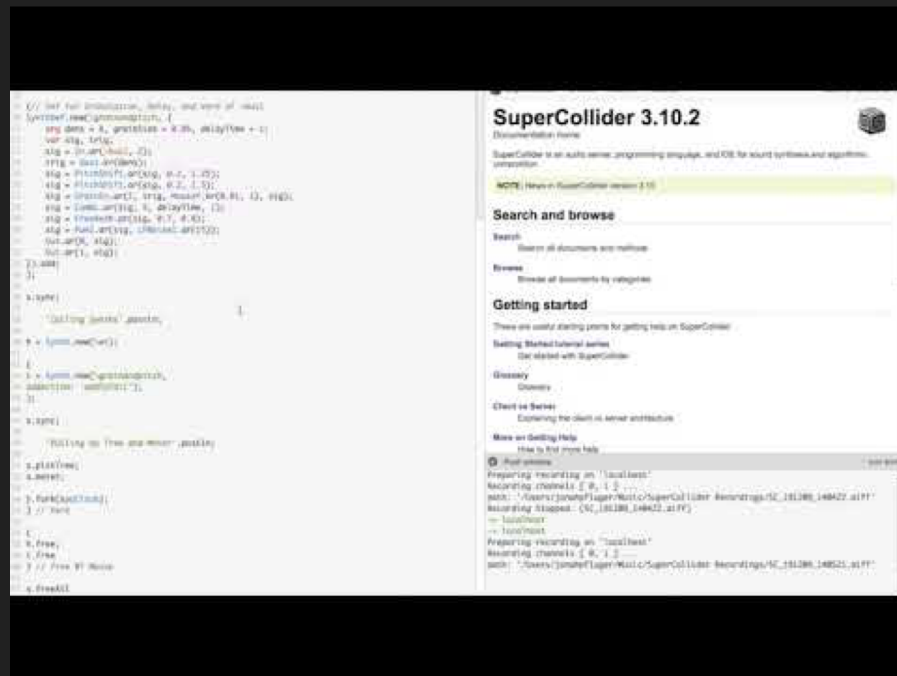
# The instruments... (part 7)

- SuperCollider Instrument: Granular Pitch Shifter
- A live audio processing tool that granulates an input signal, and allows the user to shift up by a pythagorean third or a perfect fifth.



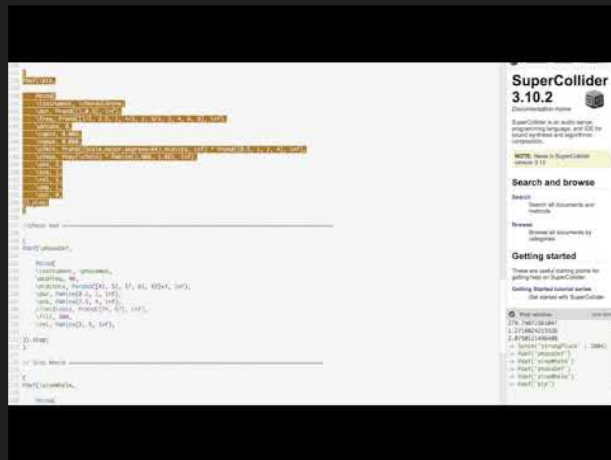
# The instruments... (part 8)

- SuperCollider Instrument: Mouse Control
- A very simple program that tracks mouse trackpad movement and translates that into control information



# The instruments... (part 9)

- SuperCollider Environment: Live Coding
- Conglomerate environment collected from personal explorations(of varying success), tutorial videos, and demos. (please note that some of the synthDefs in this program are not of 100% unique origin but have been lifted from demo videos etc, and reimagined in this environment)





# See for yourself!

- Github Repo with all software and source code:  
<https://github.com/jonahp1/MBETSeniorProject>
- Youtube Playlist of software demos:  
[https://www.youtube.com/watch?v=JqY6cxi3H\\_s&list=PLDmYQ1-oaJQVOBwTzW6fyMgD1uy2Ojtqm](https://www.youtube.com/watch?v=JqY6cxi3H_s&list=PLDmYQ1-oaJQVOBwTzW6fyMgD1uy2Ojtqm)

# The Event



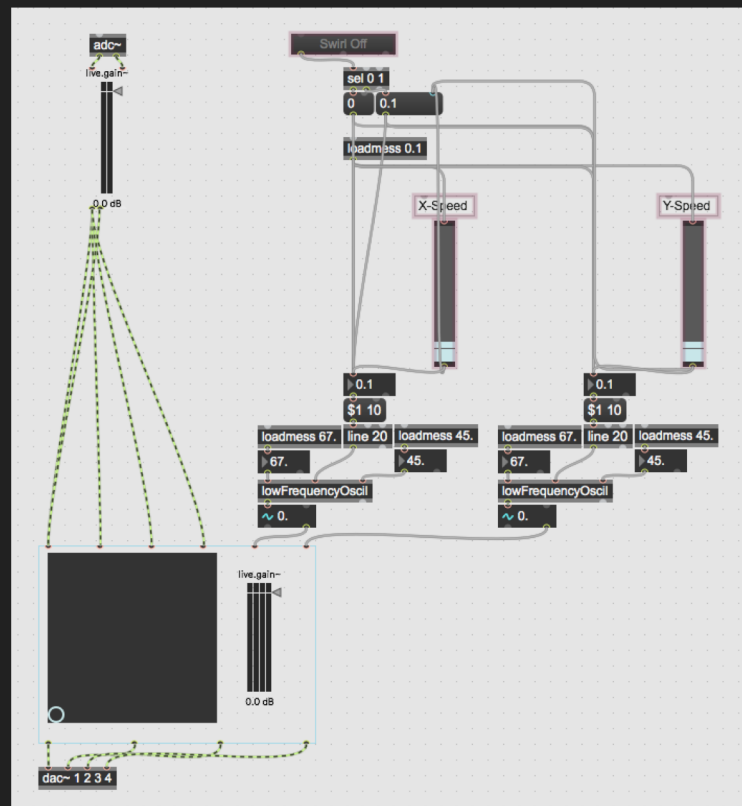
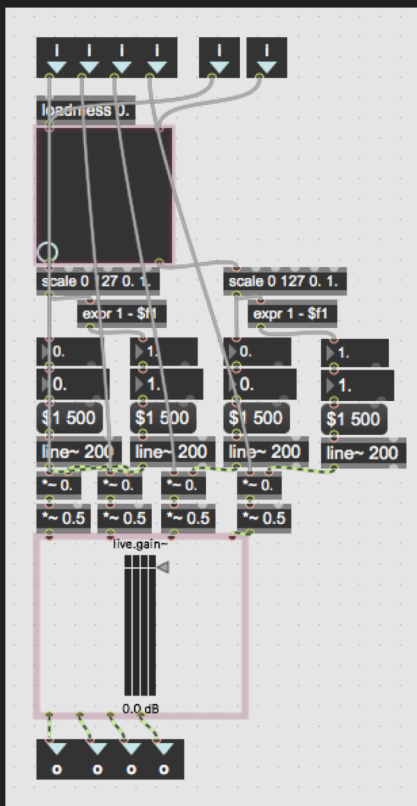
# Preparation and Promotion for the Event

- Rehearsals, etc:
  - In preparation for the performance, the group and I went through a rehearsal process to develop our collective performance skills.
  - In these, we discussed ideas about improvisation, technique for playing “off” each other, and ultimately decided on avoiding a “score” all together
  - Drive Link to Rehearsal Recordings:  
<https://drive.google.com/drive/folders/1AfuyKgbFek43PfCTmONShtPIQSCc7bBY?usp=sharing>
- Promotional Material:
  - To promote the event, I convened with an illustrator (Logan Decarme) to develop a poster concept/design etc
  - By looking at old synthesizer advertisements, as well as discussing the philosophy behind the performance, the final poster design was eventually reached (seen on previous page)
- Social Media Promotion:
  - Facebook Event
  - Instagram Postings

# Technical Considerations of the Event

- Quadraphonic speaker setup for synthesizers
  - “Hard” set up aspects: lifting and placing speakers correctly (25ft apart in perfect square), routing audio from interface through this setup
  - “Soft” set up aspects: called for necessary expansion of software instruments, necessitated abnormal routing in interface software
- Separate Stereo setup for vocals/other electronics
  - “Fake octophonic setup”: Quad + Vox Stereo + Guitar Amp + Bass Amp
- Binaural recording/livestream of the event, enhanced with “close miking” of Quad/Stereo PA system

# Quadraphonic Expansion: Max/MSP Tools



# Event Performance on Livestream:

- <https://livestream.com/uartscaplan/events/8834293/videos/199655039>

# The Paper, and how it relates to the project

- “Open Works, Open Technology: Conceptualizations of a Constructive Post-Digitalism”...
- First, it is necessary to understand (deconstructive) Post-Digital
  - “an aesthetic made up of minuscule stabs of sound, clicks, glitches, buzzes, light airy drones and hisses, mangled ring-modulated tones and grainy clouds of noise/pixels” (Andrews 1).
  - “deconstructive audio and visual techniques that allow artists to work beneath the previously impenetrable veil of digital media” (Cascone 392).
  - This is problematic:
    - As a critical aesthetic dialogue of the “post-historical” age, common understanding of “Post-Digitalism” typically includes reference to deconstructive practice; or, more verbosely put, critical regarding commodity capitalism’s administrative role in creative music technology yet unable to offer critique beyond a vaguely leftist sense of discontentment.
    - Ultimately complicit in the system that it aims to critique

# The Paper, and how it relates to the project

- Constructive Notions:
  - “critical reflection on [the] digital” that entails “a full awareness of the influence of digital culture and technologies on our modes of perception, cognition and action” (Straino 83-84).
  - “the deconstructive project of disrupting and dethroning powerful common-sense assumptions baked into dominant discourses... is not sufficient work” and “must be complemented by a reconstructive turn, seeking out”, and proposing, “visions of the future that may otherwise remain on the margins of public culture” (Goode and Godhe 114).
  - “if glitch music is to advance past its initial stage of blind experimentation, new tools must be built with an educational bent in mind” (Cascone 398).
- Ferguson and Brown’s Post-Digital Avant-Garde (2016):
  - Live electronic music-making;
  - Engage[ment] with technical materiality and tool making;
  - Celebration [of] uncertainty through improvisation and algorithmic process;
  - Openly shared and community oriented practices



# The Paper, and how it relates to the project

- “Though aural aesthetics are always important in any musical ontology, constructive Post-Digital practice differs from deconstructive practice in its primary definition by its characteristic processes, rather than by its final aesthetic results. The implicit “update” of the Post-Digital ontology lies in its expansion beyond aesthetics into practice, in the educational bent of its engagement with technical materiality, in its inclusion of the egalitarian dialogues of improvisation and indeterminacy, and in its commitment to free/openly shared practice.” (Pfluger 24)

# Next Steps, all accounts

- Software: Expand digital tools, rebuild and create new with lower level languages (C++, Python), build instruments into Hardware/Embedded Systems (Pi, Bela, etc.)
- Event: Continue developing concepts that originated in the performing group, continue performing with this ensemble, release performance as “live record”
- Learn more!

The end.

