Madhav Ghei

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Education

Northwestern University, *Evanston, IL* ....**Aug 2019 (Expected)**
School of Communication
Master of Arts in Sound Arts and Industries

Northwestern University, *Evanston, IL* ....**Jun 2018**
Robert R. McCormick School of Engineering and Applied Science
Bachelor of Science in Computer Science, Minor in Music Technology

Work Experience

SONDE Publishing (Olivia Block), Summer Audio Engineering Intern, Chicago, IL ....**Jun-Ongoing**
- Created an indoor "Bertoia Sonambient" instrument for Block using wind sensors, Arduino, and Max/MSP.
- Coached and co-conducted the ChiMOP Summer Youth Orchestra, for whom Block composed a score.
- Updated and re-designed Block's website.

Northwestern University, Ableton Live Workshop Leader, Evanston, IL ....**May 16, 2019**
- Formulated a targeted lesson plan by gathering questions from attendees in advance.
- Trained, educated, and mentored attendees on selected concepts in production and post-production in Live.

Northwestern University, Graduate Teaching Assistant, Evanston, IL ....**Apr–Jun 2019**
Class name: RTVF 376 - Digital Musical Instrument Design
- Provided additional instruction and one-on-one lessons with students as needed.
- Solidified understanding of Arduino microcontrollers and prototyping simple circuits with breadboards.
- Expanded upon Max/MSP skills by incorporating serial data from Arduinos into complex patches.
- Worked with students to help them craft plans for prototyping and constructing their instruments.

Interactive Audio Lab (Northwestern University), Undergraduate Research Assistant, Evanston, IL ....**Jan–Sep 2018**
- Developed a UI for an audio search engine in HTML5/CSS/JavaScript (with JQuery), which allows users to search a database of sounds using a vocal imitation of the desired sound as the query.
- Connected the web UI to a Python Flask backend that runs a deep learning search model.
- Co-authored two research papers, published in DCASE conference proceedings (see Publications).

Other Experience and Projects

Northwestern University, Evanston, IL..**Apr–Jun 2019**
- Composed and published *Sir Ghei EP*, a five-track EP of sound art and experimental electronic music.
- Presented the EP at Northwestern University for the Sound Arts and Industries MA program.

Arup Sound Lab, Chicago, IL..**May 2019**
- Composed "Partial Occluder", a sound art piece, using VCVRack and Ableton Live, then mixed into ambisonics in Reaper using IEM plugin suite.
- Selected as one of five artists to present ambisonic pieces at the Arup Sound Lab.

DJ Performance, Evanston, IL..**May 2018**
- Using a Traktor S2 DJ controller, performed a 20 minute set at Evanston Rocks for Dillo Day Battle of the DJs.
- Offered basic mixing instruction (tempo-matching, key-matching, FX for song transitions) to several peers.

Skills

- *Instrumental:* Violin (classically trained), Ableton Push (self-taught), Guitar (self taught), Traktor (self-taught).
- *Computer Skills:* Ableton Live, Pro Tools, Max/MSP, Traktor, Python, HTML, CSS, JavaScript.
- *Spoken Languages:* English (native), German (B2 level), Hindi (colloquial/familial), Spanish (AP-level).

Publications

- Margolis, B., **Ghei, M.,** Pardo, B. (2018) "Applying Triplet Loss to Siamese-Style Networks for Audio Similarity". *DCASE 2018 Proceedings.* https://bit.ly/2Wneo7U.
- Kim, B., **Ghei, M.,** Pardo, B., Duan, Z. (2018) "Vocal Imitation Set: a dataset of vocally imitated sound events using the AudioSet ontology". *DCASE 2018 Proceedings.* https://bit.ly/2RQTWh0.