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

Experience

SONDE Publishing (Olivia Block), Summer Audio Engineering Intern, *Chicago, IL* ....**Jun-Aug 2019**
- Developed an indoor "sonambient" instrument for Block using wind sensors, Arduino, and Max/MSP.
- Documented progress and aided Block with an outdoors sound art installation at the University of Chicago.
- Recorded and mixed the Symphony Youth Orchestra playing a score composed by Block.
- Updated and re-designed Block's website.

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).

Ford Motor Company, Business Continuity & Disaster Recovery (BC/DR) Intern, *Dearborn, MI* ....**Jun–Sep 2017**
- Planned, coordinated, and drove DR tests.
- Optimized DR test workflow by eliminating redundancies and automating steps of the process.
- Developed an online form to gather feedback and evaluate future Call-Tree Tools and BC tests.
- Created a metric tracker to automatically report results from future DR tests.
- Gained an understanding of Ford policies relating to BC/DR, and logistically, how multiple departments work together to perform testing.

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.

Recent Coursework 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.

Skills

- *Computer Skills:* Python, HTML/CSS,/JavaScript, SQL, Git, Ableton Live, Pro Tools, MaxMSP.
- *Spoken Languages:* English (native), German (B2 level), Hindi (colloquial/familial), Spanish (AP-level)