

# 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

**Northwestern University, Teaching Assistant, Evanston, IL** ..... **Apr 2019 - Ongoing**

- RTVF 376: Digital Musical Instrument Design

**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 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 certain 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.

**Music Production** ..... **Ongoing**

- Mostly original musical compositions, some compositions sample other works (see portfolio).
- Pieces produced in Ableton Live, Logic Pro X, FL Studio, or Pro Tools, and mastered in Adobe Audition.

## 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

**Arup Sound Lab, Chicago, IL** ..... **May 2019**

- Composed "Partial Occluder", a sound art piece, using VCV Rack and Ableton Live, then mixed into ambisonics in Reaper using IEM plugin suite.
- Selected to present "Partial Occluder" at the Arup Sound Lab.

**Northwestern University: SAI 501: Introduction to Sound Production** ..... **Sep-Dec 2018**

- Recorded, mixed and mastered a song performed by Greenleaf, a local folk band, using the SSL AWS 948 analog mixing board and Pro Tools.
- Composed, mixed and mastered an original composition using MaxMSP and Max4Live in Ableton Live.

## Skills

### Computer-Based:

- Music software: Ableton Live, ProTools, Adobe Audition, Logic Pro X, FL Studio, Reaper, VCV Rack.
- Programming language: Java, C, C++, C#, Python, Racket, HTML, CSS, JavaScript.

### Instrumental:

- Violin (classically trained), Guitar (some formal training), DJ (self-taught), Ableton Push (self-taught).

**Spoken Languages:** English (native), Hindi (colloquial/familial), German (college-level), Spanish (AP-level)