

contact

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links

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programming

Python (15 + years)
C++ (5 + years)
R (2 + years)
MaxMSP (10 + years)

teaching

Certificate in Higher
Education (2019)

frameworks

Tensorflow
NLTK

software

Sketch
Google Docs
MS-Office Suite
LaTeX
Logic Pro
Ableton

Grants and Awards cont

- Associated Graduate Students Research Grant (2015)
- Claire Trevor School of the Arts Research Grant (2015)
- Creative Young Stars Program (2013)
- HISSandaROAR Field Recording Competition Winner (2013)
- Australia Council - Art Start Grant (2012,
- International Association of Jazz Education Pat Corrigan Recording Scholarship (2007)

About

I am researcher in human computer interaction and music technology, focused on improving how humans engage with artificial intelligence

Grants and Awards

- 2019 **Creating Trust Between Groups of Humans and Robots Using a Novel Music Driven Robotic Emotion Generator** National Science Foundation, National Robotics Initiative 2.0
Lead author of \$700,000 grant to develop the role of non-linguistic expressions in trust building and human-robot interaction
- 2018 **Moog Hackathon Winner** Georgia Institute of Technology
Implemented a model of distributed cognition through a musical interface

Education

- 2017 + **Ph.D** in Music Technology Georgia Institute of Technology
(minor in Human-Computer Interaction), researcher in the Robotic Musicianship Lab
- 2013–2016 **MFA** in Composition, Improvisation and Technology University of California, Irvine
Masters Thesis in Artificial Computer Musical Improvisers
- 2008–2011 **Bachelor of Music** Sydney Conservatorium of Music, University of Sydney
Extensive computer science and music class work

Experience

- (2017 +) **Lead Developer of Shimon the Marimba Playing Robot** Georgia Institute of Technology
Highlights include a robot generated film score using computer vision, and a nomination for Best Jazz Performance at the Danish Grammy Awards. Current work involves development of lyrics and spoken word
- (2013 - 2018) **Software Developer and Pedagogy Creator** Earsketch
Updated the curriculum for JavaScript and Python for school students. Developed a new curriculum for high school teachers to use Earsketch in the classroom
- (2007 +) **Professional Saxophone/Clarinet/Flute and Composer/Orchestrator**
Highlights include awards for the Best Music for and Indie Game, and composition for and ad campaign featuring Roger Federer

Publications

- Robotic Musicianship: Comparing a Deep Learning Lyric Generator through Software and Embedded Robotics** chapter in *Handbook of Artificial Intelligence and Music*, Springer, 2020
- Establishing Human-Robot Trust through Music-Driven Robotic Emotion Prosody and Gesture** 28th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN)
- Soccer Sonification: Enhancing viewer experience** International Conference on Auditory Display, 2019
- Learning from History: Recreating and Repurposing Sister Harriet Padberg's Computer Composed Canon and Free Fugue** *New Interfaces for Musical Expression*, 2019
- Finding Shimi's Voice: Fostering Human-Robot Communication With Music And a NVIDIA Jetson TX2** *Linux Audio Conference*, 2019
- An Interactive Algorithmic Music System for EDM** *Dancecult: Journal of Electronic Dance Music Culture* 10 (1), 2018
- Shimon the Robot Film Composer and DeepScore** *Computer Simulation of Musical Creativity*, 2018