

Curriculum Vitae

PERSONAL INFORMATION	Name Home address Telephone number Email address	Nathan Keil 369 Congress Street, Troy, NY 12180 +1 716 930 8350 keiln@rpi.edu
EDUCATION	Rensselaer Polytechnic Institute , Troy, NY <i>Architectural Acoustics, M.S.</i> May 2018 – May 2020 <ul style="list-style-type: none">– Thesis: “Polyphonic pitch perception in rooms using deep learning networks with data rendered in virtual acoustic environments”– Advisor: Prof. Jonas Braasch <i>Applied Physics, B.S., Cum Laude</i> August 2014 – May 2018 <ul style="list-style-type: none">– Concentration: Architectural Acoustics– Minor: Music Technology	
RELEVANT COURSEWORK	Introduction to Deep Learning, Ensemble Nonlinear, Sonics Research Lab I & II, Sonification Art & Science, Sound Recording & Production, Music and Technology I & II, Engineering Acoustics, Architectural Acoustics I & II, Aural Architecture, Psychoacoustics, Music Theory I, Computer Music.	
COMPUTER SKILLS	<i>Proficient:</i> MATLAB, Python, TensorFlow, Max/MSP, Pure Data, ChuckK, git, L ^A T _E X, Digital Audio Workstations. <i>Familiar:</i> C++, HTML, CSS	
PROFESSIONAL EXPERIENCE	Adobe Research , San Francisco, CA <i>Internship</i> August 2019 – November 2019 Wrote a Python module for an Audio Processing Library in order to streamline the data preprocessing pipeline for easier audio machine learning research. Rensselaer Polytechnic Institute , Troy, NY <i>Undergraduate Co-Op</i> June 2017 – December 2017 Built an audiovisual system designed to network remote music performers with physical disabilities to a MIDI ensemble in an immersive environment.	
ADDITIONAL EXPERIENCE	Acoustical Society of America RPI Student Chapter , Troy, NY <i>President</i> September 2018 – May 2019 Ground Zero Basement , Troy, NY <i>Booking Manager</i> May 2018 – May 2019 Booking/promoting and event organizing for a DIY music venue. RPI Orchestra , Troy, NY <i>Principal Cellist</i> September 2017 – May 2018 Society of Physics Students RPI Chapter , Troy, NY <i>Vice President</i> May 2016 – May 2017	

HONORS AND AWARDS	Acoustical Society of America Student Design Competition Commendation Award (USD 700, 2017).		
PUBLICATIONS	Conference Keil, N., et al., “Polyphonic pitch perception in rooms using deep learning networks with data rendered in auditory virtual environments” <i>177th Meeting of the Acoustical Society of America</i> , 2019. Çakmak, C., Huang, M., Keil, N., “Designing immersive audiovisual environments for music performers with disabilities” <i>International Symposium on Adaptive Technology in Music and Art</i> , 2017 (submitted).		
REFERENCES	Prof. Jonas Braasch RPI Troy, NY	Prof. Rob Hamilton RPI Troy, NY	Juan-Pablo Caceres Adobe Research San Francisco, CA