

Derek Kwan

computers and music

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- Education**
- 2021-present **MSc, Georgia Institute of Technology**, Computer Science
(GPA: 4.00/4.00)
Specialization: Interactive Intelligence
 - 2011-2015 **DMA, State University of New York, Stony Brook**, Music Performance (Percussion)
(GPA: 3.95/4.00)
Advisor: Eduardo Leandro
 - 2008-2010 **MA, Queens College, City University of New York**, Music Performance (Classical Percussion)
(GPA: 3.975/4.00)
 - 2004-2008 **BASc, University of California, Davis**, Music (Percussion) and General Mathematics
(GPA: 3.708/4.00)
- Writing**
- 2021 Alexandre Torres Porres, **Derek Kwan**, Matthew Barber. "Almost 20 years of Cyclone: past, present, and future". Revista Vortex 9 (2), 2021. <https://doi.org/10.33871/23179937.2021.9.2.15>
 - 2021 Anne Sophie Andersen, **Derek Kwan**. "Grisey's 'Talea': Musical Representation As An Interactive 3D Map". New Interfaces for Musical Expression (NIME), 2021. <https://nime.pubpub.org/pub/oiwz8bb7/release/1?readingCollection=71dd0131> (app: <https://derekxkwan.github.io/talea-vis/>)
 - 2020 Sofy Yuditskaya, Sophia Sun, **Derek Kwan**. "Karaoke of Dreams: A multi-modal neural-network generated music experience". Joint Conference on AI Music Creativity (CSMC + MuMe), 2020. https://boblsturm.github.io/aimusic2020/papers/CSMC_MuMe_2020_paper_5.pdf (video: <https://www.youtube.com/watch?v=YVYUmCHzzH8>)
 - 2016 Alexandre Torres Porres, **Derek Kwan**, Matthew Barber. "Cloning Max/MSP Objects: a Proposal for the Upgrade of Cyclone". Fifth International Pure Data Convention (PdCon), 2016. https://derekxkwan.com/res/pdcon16_cyclone-paper.pdf
- Presentations and Workshops**
- 2021 **Karaoke of Dreams: A multi-modal neural-network generated music experience**, online recorded virtual paper presentation with Sofy Yuditskaya and Sophia Sun for McGill Music Graduate Symposium
 - 2020 **TidalCycles Live Coding Workshop**, Bombay Beach, CA
workshop at Mars College on the TidalCycles electronic music live coding environment
 - 2018 **socketMusic: wireless**, Lewiston, ME
presentation and performance of new revision of my composition for improvised percussion, electronic sound, and mobile devices at Bates Digital Music Symposium
- Teaching**
- 2017 **Temporary Lecturer**, Music 107A: Introduction to Electronic Music I, UC Davis
overview of electronic music history, recording studio basics, and fixed-media composition
- Other Professional Experience**
- 2020-2021 **Music and Digital Art Curator, Art Music Lit Space**, online
write content (curation and exhibition statements) for the virtual exhibition space
 - 2013-2015 **Lab Assistant and Programmer, SBU Teaching Learning Lab**, Stony Brook NY
Working under Paul St. Denis with SBU faculty on interactive digital media projects investigating novel methods of human-computer interaction and full-stack web application development for class-oriented learning tools and data visualization
 - 2013 **Audio/Video Collections Manager, SBU Music Library**, Stony Brook, NY

Archival activities for the music library's analog and digital media

2012-2013 **Graduate Assistant, SBU Computer Music Studio**, Stony Brook, NY
Live sound reinforcement and technology management for music department concerts and setting up and running a new campus recording studio

2011-2012 **Graduate Assistant, SBU Contemporary Chamber Players**, Stony Brook, NY
Organization and planning of concerts and rehearsals

2010-2011 **Private Instructor in Percussion (freelance)**, Flushing, NY

Fellowships and Residencies

2022 **Composer Residency, Virginia Center for the Creative Arts**, Amherst, VA

2020 **Project Participant and Contributor, Art-a-Hack Dancedemic**, New York, NY / online remote hackathon in conjunction with Battery Dance Festival (<https://artahack.io/projects/hieroglyph/>)

2010 **Performance Fellow, Bang on a Can Summer Music Institute**, North Adams, MA

2008 **Performance Fellow, soundSCAPE Composer and Performance Exchange**, Pavia, Italy

2007 **Performance Fellow, International Marimba Festival**, Salzburg, Austria

Exhibitions

2020 **Small File Media Festival**, Vancouver, BC
glitch video *bombaybeach* featured at online festival

2019 **Music Makers Art Exhibition at Hacker Lab**, Sacramento, CA
featuring my computer-generated visual art *studious overachieving*, *polyhealth*, and *catmoticon portraits* alongside other visual art by musicians

2019 **The Brickhouse Art Gallery**, Sacramento, CA
month-long curation of work alongside work by Tavarus Blackmon and Boris Allenou

Honors and Awards

2008 **Phi Beta Kappa, University of California, Davis**

Relevant Graduate Coursework

Georgia Tech

Deep Learning (in progress)
Machine Learning
Artificial Intelligence
Knowledge-Based AI
Computer Vision
Robotics: AI Techniques
Human-Computer Interaction
Educational Technology
Computer Networks
Software Development Process

Projects

2022 **Rhythm OLMITS**
an intelligent tutoring system for teaching musical rhythm performance originally developed for Georgia Tech's EdTech class (paper: <https://smartech.gatech.edu/handle/1853/67085>, code: https://github.com/derekxkwan/rhythm_olmits)

Skills

General programming - **Python**, (Scikit-learn, Numpy, Matplotlib, OpenCV), **C**, **Java**, **JavaScript**, (Node.js, Electron, React), **ClojureScript**
Audio programming - **Pure Data**, **SuperCollider**, **TidalCycles**, various **DAWs**, (Logic, Ardour)
Other creative computing - **Processing**, basic physical computing with **Arduino**
Git, daily use of **Linux**