

Victor Shepardson

victor-shepardson.github.io

Researcher
Developer
Musician

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Education

University of Iceland / PhD candidate, Cultural Studies

September 2021 - present, Reykjavík, Iceland

In a joint arrangement with the Intelligent Instruments Lab at the Iceland University of Arts.

Research in new instruments for musical expression and phenomenology of AI.

Dartmouth College / MA, Digital Musics

September 2014 - June 2016, Hanover, NH, USA

Coursework including computer music composition, animation, psychoacoustics, music information retrieval, data visualization, machine learning and deep neural networks. Live sound and performance in the contemporary music ensemble.

University of Virginia / BA, Computer Science

August 2010 - May 2014, Charlottesville, VA, USA

Highest distinction, Phi Beta Kappa. Undergraduate thesis on procedural texture synthesis in computer graphics. Coursework including computer graphics, computer music, and programming languages.

Work

Freelance Developer

2014 - Present

- ⇒ Software and installation for upcoming work by Jenna Sutela at *And Yet It Moves* and Helsinki Biennial in 2023
- ⇒ ML speech-synthesis algorithms and video installation for *Deviant Chain*, a multimedia project with Stefan Maier and Alan Segal at Ultima Festival 2019 in Oslo
- ⇒ Contract data science work for security and mobile app startups from 2017-2018
- ⇒ Max/MSP speech-to-control voltage converter for a performance of Robert Ashley's *The Double* planned by Max Eilbacher
- ⇒ Generative video software for the Synesthesia music visualizer licensed to the platform and individuals
- ⇒ Concert telephony system using AWS and Twilio for composer Nathan Davis's piece *a Sound uttered, a Silence Crossed* (2014)

Machine Learning Engineer

Ntrepid, 2019 - 2021, Herndon, VA

Research & development of deep neural text-to-speech and vocoding systems. Reproduced and extended state-of-the art generative models methods using pytorch.

Teaching Assistant

Dartmouth College, 2015 - 2016

University of Virginia, 2012 - 2014

Courses in Machine Learning, Sonic Arts, Computer Architecture, Discrete Math, Algorithm, and Computer Graphics. Live sound for numerous musical performances.

Research Intern

Arqball LLC, 2013, Charlottesville, VA

Researched algorithms for editing 360° product photography and developed a web application using Google's native client platform.

Presentations

Hugarflug Research Festival / Panel

February 2023, Iceland University of Arts, Reykjavík

Panelist in a discussion of AI and the art world

Embodied AI Workshop / Talk

November 2022, University of Oslo and online

Short talk about the lived experience with AI, MIDI models, and micro-phenomenology

AI Music Creativity / Presentation

September 2022, online

Notochord: A Flexible Probabilistic Model for Embodied MIDI Performance

Ómar Festival / Workshop

July 2022, Hjalteyri, Iceland

Demonstrated the Proto-Langspil and organized a performance with festival attendees

Moving Strings Symposium / Talk

December 2021, Iceland University of Arts and online

Live demonstration of no-input mixing board and SuperCollider

Hybrid Live Coding Interfaces / Presentation

November 2021, online

Sound Seed Automata, a SuperCollider interface for programming sound with sound

Musical Metacreation at ICCC / Demonstration

June 2016, Paris, France

Audiovisual Synthesis with ABSTRACT/CONCRETE

DAX 2016 / Installation

May 2016, Hood Museum, Dartmouth College

Halting Problem for Turing machines, TVs and speakers

International Computer Music Conference / Composition

October 2015, Denton, TX

Studies In Being Alive I-III for fixed media

Selected Publications

Shepardson, V., Armitage, J., & Magnusson, T. 2022. Notochord: a Flexible Probabilistic Model for Embodied MIDI Performance. In *Artificial Intelligence and Music Creativity*. Zenodo.

Franzson, D. B., Shepardson, V., & Magnusson, T. 2022. Autocoder: a Variational Autoencoder for Spectral Synthesis. In *Proceedings of the International Computer Music Conference*.

Armitage, J., Magnusson, T., Shepardson, V. and Ulfarsson, H., 2022. The Proto-Langspil: Launching an Icelandic NIME Research Lab with the Help of a Marginalised Instrument. In *International Conference on New Interfaces for Musical Expression*. PubPub.

Shepardson, V., 2016. Audiovisual Synthesis with ABSTRACT/CONCRETE. *Proceedings of the 4th International Workshop on Musical Metacreation (MuMe 2016)*

Recent Performances

Living Art Museum, Reykjavík 2023. Sonic batons with Majella Clarke and Nicola Privato

Vic & Bob @ Mengi, Reykjavík 2022. Laptop, no-input mixer and modular duo with Bob Hermit

INNI showcase @ Iceland Airwaves, Reykjavík 2022. Jam with Intelligent Instruments Lab members

Ómar Festival, Hjalteyri 2022. Proto-langspil group improvisation

Sonic Fluidities, UCSD (remotely) 2018. Video projection for Clara Latham/New Pope keynote