Victor Shepardson

victor-shepardson.github.io

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Researcher
Developer
Musician

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 texture synthesis in computer
graphics. Coursework in computer graphics, computer music, and programming languages.

Work

Freelance Developer

2014 - Present

- Software, sound design and installation for *Pond Brain,* a work by Jenna Sutela in two versions
  for Copenhagen Contemporary and the 2023 Helsinki Biennial
- ML speech-synthesis algorithms and video installation for *Deviant Chain,* a concert installation
  with Stefan Maier and Alan Segal at Ultima Festival 2019 in Oslo
- Contract data science work for software 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

Grading and office hours for Machine Learning, Sonic Arts, Computer Architecture, Discrete Math,
Algorithms, and Computer Graphics. Live sound for numerous musical performances.

Research Intern

Arqball LLC, 2013, Charlottesville, VA

Researched algorithms and in-browser deployment for editing 360° product photography.

Presentations

New Interfaces for Musical Expression / Presentation
June 2023, Centro de Cultura Digital, Ciudad de México
The Living Looper: Rethinking the Musical Loop as a Machine Action-Perception Loop

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, Pierre and Marie Curie University, Paris
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. and Magnusson, T. 2023. The Living Looper: Rethinking the Musical Loop as a Machine Action-Perception Loop. In *International Conference on New Interfaces for Musical Expression*.

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, Rekjavík 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

Academics	**Area Chair,** AIMC 2023
	MS Thesis External, Karl Jóhansson, University of Reykjavík Computer Science, 2023
	Workshop Organizer, NIME 2022
	MS Thesis External, Kim Cosmo Ström, University of Iceland Computer Science, 2022
	Reviewer, Nordic SMC 2021