

Victor Shepardson

victor-shepardson.github.io

Developer /
Researcher /
Artist

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Tools

General Computing

Python, C/C++, Haskell; AWS; UNIX, git

Machine Learning & Data Science

Scientific Python stack + scikit-learn, pytorch, tensorflow, theano, pymc3; MATLAB

Creative

Creative coding e.g. openFrameworks; graphics with OpenGL; music DSP & DAW inc. Ableton/Reaper/Ardour, SuperCollider, Max/Pd; photo+video editing e.g. Adobe Ps/Ae/Pr

Education

Dartmouth College / M.A. Digital Musics

September 2014 - June 2016, Hanover, NH

Course work including computer music composition, animation, psychoacoustics, music information retrieval, data visualization, machine learning and deep neural networks.

University of Virginia / B.A. Computer Science

August 2010 - May 2014, Charlottesville, VA

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

Master's Thesis

ABSTRACT/CONCRETE: An Audiovisual Synthesizer.

Professor Michael Casey, Associate Professor Jodie Mack, and Assistant Professor Ashley Fure

This thesis presents original work in generative audio-video. In it I describe the theory and implementation of a software synthesizer called ABSTRACT/CONCRETE, in which high resolution digital video feedback is coupled to an audio-rate multi-agent system and exposed to interactive control. I present *AVFB#3* and *CHERUB* as fixed works derived from interaction with the system.

Work Experience

MyBliss / Contractor

Fall 2017 - Present

Python development for research and production: backend models and user-facing analytics for a quantified self app.

Locurity / Contractor

Spring 2017

Python development, research and data visualization for a statistical anomaly detection system. Tools including AWS, bokeh, matplotlib, scikit-learn, and pytorch.

Freelance / Developer

2014 - Present

- ⇒ Commissioned by Max Eilbacher to develop a speech to control voltage converter using Max/MSP for performance of Robert Ashley's *The Double*.
- ⇒ Licensed to Gravity Current generative video software for Synesthesia performance platform.
- ⇒ Commissioned by Nathan Davis to develop a concert telephony system using AWS and Twilio for the piece *a Sound uttered, a Silence Crossed* (2014)

Dartmouth College / Teaching Assistant

2015 - 2016, Hanover, NH

Graded assignments for Machine Learning with Lorenzo Torresani. Held office hours and provided Ableton Live support for Introduction to Sonic Arts with Ashley Fure. Set up and ran equipment for numerous musical performances.

University of Virginia / Teaching Assistant

2012 - 2014, Charlottesville, VA

Graded and ran labs for Computer Architecture with John Stankovic. Graded for Discrete Math with Hamed Soroush. Graded and held office hours for Algorithms with Abhi Shelat and Computer Graphics with Luther Tychonievich.

Arqball, LLC / Research Intern

Summer 2013, Charlottesville, VA

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

Volunteer Experience

DataKind DC / Data Diver

December 2016

Participated in a weekend-long data science hackathon organized by DataKind and the Annie E. Casey Foundation. My team looked at how stability/mobility in foster care placements depends on the children and facilities involved, and how it affects eventual outcomes for those children. I investigated the predictive power of child & provider variables on desirability of outcome, contributing visualizations produced using Python.

Presentations & Performances

Musical Metacreation Workshop 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.

DAX 2015 / Installation

May 2015, Dartmouth College

Living Lattice for digital video feedback.

Contemporary Music Ensemble / Performer

2014-2016, Dartmouth College

Performances in and around Dartmouth's contemporary music ensemble at venues including Spectrum NYC and Dartmouth's EYEWASH series and New Music Festival.

Solo / Performer

2013 - Present

Musical performance and video projection at venues including Out of the Blue Too Gallery in Cambridge, MA and Twisted Branch Tea Bazaar in Charlottesville, VA.