# Aaron Krajeski

## Education

2011–2013 M.A. Music Technology, McGill University, Montréal.

2005–2009 B.S. Physics, The College of William & Mary, Williamsburg, VA.

## Master's thesis

title A Flexible Tool for the Visualization and Manipulation of Musical Mapping Networks

supervisors Marcelo Wanderley

description Developed a modular javascript browser-based user interface for mapping arbitrary musical control parameters to sound synthesis inputs.

### Work

2015–2016 Software Developer, Humtap, San Francisco.

Primary developer in charge of algorithmic music composition

- Used machine learning techniques to create song structure and chord progressions
- o Interfaced with musical composers to codify and implement their ideas
- Optimized the audio rendering process
- Wore many hats: modified iOS code, maintained servers

#### 2014–2015 **Technical Artist**, *PLAYMIND*, Montréal.

Served as the liaison between the art and technical teams for interactive projects

- o Technical Artist for The Innerfriend, a kinect-based XBOX One game
  - Optimized GPU code
  - Authored general purpose GPU programs in DirectCompute for the simulation of physical systems like complex colliders and jellyfish tentacles.
  - Wrote graphical shaders
- o Software developer for the city of Joliette Québec's 150th anniversary installation
- Software developer for Ma Vie Comme Rivières at La Musée Regional D'Argenteuil. An permanent, interactive kinect-based retelling of the geographical and human history of Argenteuil, Québec.

#### 2013–2014 **Software Developer**, *The Deep Listening Institute*, Montréal.

Developed The Adaptive Use Musical Instrument (AUMI), a musical interface employing computer vision techniques for use in classrooms. AUMI users are specifically those whose physical disabilities prevents performance with traditional musical instruments.

## Skills

Languages Python, C++, C#, Javascript

Frameworks OpenFrameworks, OpenCV, Unity3D

Graphics OpenGl, webGl, HLSL, GLSL

Parallel DirectCompute, CUDA

Computing

## References

- Jalil Lalami: Technical director at PLAYMIND. jalil@playmind.com
- Emmaneul Sevigny: Owner/CEO of PLAYMIND. sevigny@playmind.com
- Professor Marcelo Wanderly: Director of IDMIL and CIRMMT laboratories. marcelo.wanderly@mcgill.ca