

# Aaron Krajeski

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## 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

- 2016–Present **Software Developer**, *ScribbleChat*, New York.  
Lead developer for 3D graphics design and implementation
- Developed effects using THREE.js and WebGL
  - Worked with AR and iOS
  - Created graphics assets in Photoshop/Maya/After Effects/etc.
  - Developing an API with our effects interface
- 2015–2016 **Algorithmic Composer**, *Humtap*, San Francisco.  
Primary developer in charge of algorithmic music composition
- Used machine learning techniques to create song structure and chord progressions
  - Analyzed and visualized user data
  - Interfaced with musical composers to codify and implement their ideas
  - Optimized the audio rendering process
- 2014–2015 **Software Developer**, *PLAYMIND*, Montréal.  
Served as the liaison between the art and technical teams for interactive projects
- Technical Artist for *The Innerfriend*, a Kinect-based XBOX One game
    - Optimized GPU code, wrote shaders
    - Authored general purpose GPU programs in DirectCompute for the simulation of physical systems like complex colliders and jellyfish tentacles.
  - 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.

## Skills

- Languages Python, C++, Javascript, C#  
Graphics OpenGL, OpenCL, Threes.js, Direct3D, CG, HLSL, GLSL, DirectCompute, CUDA  
Asset Creation Photoshop, Maya, Blender, AfterEffects  
Frameworks THREE.js, Unity3D, OpenFrameworks, MaxMSP  
Protocols OSC, MIDI, Kinect, Arduino, Raspberry Pi

## References

- Ford Hurley: Lead developer at ScribbleChat. ford@scribble.chat
- Julien Bloit: Technical director at HUMTAP. julien@humtap.com
- Jalil Lalami: Technical director at PLAYMIND. jalil@playmind.com