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

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
- 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
- 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
- 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.

2009–2010 International Baccalaureate Mathematics and Physics Teacher, *Suzhou Singapore International School*, Suzhou, China.
Taught IB Mathematics for grades 9 through 11 and IB Physics for grade 11.

Skills

Languages	Python, C++, Javascript, Go
Graphics	OpenGL, OpenCL, Threes.js, Direct3D, CG, HLSL, GLSL
Parallel Computing	DirectCompute, CUDA
Frameworks	Matlab, Octave, OpenCV, Unity3D

References

- Julien Bloit: Technical director at HUMTAP. julien@humtap.com
- 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