

Aaron Krajewski

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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/Data Scientist**, *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 **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
 - 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.

Skills

- Languages Python, C++, Javascript, Haskell
Frameworks Matlab, Octave, OpenCV, Unity3D
Skills Machine Learning, Data Visualization
Parallel DirectCompute, CUDA
Computing

References

- Julien Bloit: Technical director at HUMTAP. julien@humtap.com
- Jalil Lalami: Technical director at PLAYMIND. jalil@playmind.com
- Emmanuel Seigny: Owner/CEO of PLAYMIND. seigny@playmind.com
- Professor Marcelo Wanderly: Director of IDMIL and CIRMMT laboratories. marcelo.wanderly@mcgill.ca