Aaron Krajeski

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Work

2018-Present **Graphics Engineer**, *Google*, Montreal.

Engineer designing implementing and supporting the Canvas element in Google Chrome

- Work to improve performace of graphics in chrome for billions of users across all devices
- o Launched always accelerated canvases which better leveraged GPU resources to improve Canvas rendering speed by 70%
- Created metrics to measure rasterization time for Canvas
- Dealt with dozens of critical security errors

2016-2018 **Technical Artist**, *ScribbleChat*, New York.

Lead developer for 3D graphics, design and implementation

- Developed effects using THREE.js and webGL
- Worked with AR and iOS
- Developed an API with our effects interface
- o Previously available in iOS app store, Google play store and as an iMessage and Facebook messenger extension with 80,000 daily active users

2015–2016 Algorithmic Music 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
- o Interfaced with musical composers to codify and implement their ideas
- Optimized the audio rendering process

2014–2015 **Graphics Engineer**, *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, wrote shaders
 - Authored general purpose GPU programs in DirectCompute for the simulation of physical systems like complex colliders and jellyfish tentacles.
- o 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 Engineer**, *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, Javascript, C++, C#

Other THREE.js, GLSL, OpenGL, WebAssembly

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.

References

- Ford Hurley: Lead developer at ScribbleChat (949) 423-8231 <ford.hurley@gmail.com>
- Julien Bloit: Technical director at HUMTAP < julien@humtap.com>
- Emmanuel Sévigny: Founder of PLAYMIND (514) 983-7186 <emmanuel@playmind.com>