

EDUCATION **Ph.D. Computer Science and Engineering**, University of Michigan AUGUST 2015
 Dissertation: *Not All Gestures Are Created Equal: Gesture and Visual Feedback in Interaction Spaces*
 Advisor: Georg Essl, GPA: 3.7/4

Bachelor of Science with Honours, Computer Science, University of Toronto 2005 - 2010
 Artificial Intelligence Concentration, 2 years of coursework in music, GPA: 3.66/4

EXPERIENCE **Mobile Software Developer**, Contractor for Michigan State University 2015 - NOW
 Designed and built mobile applications for human rhythm perception research

Graduate Student Research Assistant, Computer Science, University of Michigan 2010 - 2015
 Designed and built novel interfaces for mobile and music to explore interaction design research
 Designed and conducted usability studies with human participants to evaluate prototypes

Data Analyst Intern, American Friends Service Committee Michigan Criminal Justice Program 2014 - NOW
 Built web crawler and database to analyze prisoner data to increase efficiency and reveal new insights
 Corresponded with inmates from Michigan prison system for assistance and advocacy

Research Assistant, School of Public Health, University of Michigan 2013 - 2014
 Analyzed phone sensor data and produced visualizations to understand influenza transmission
 Collected wifi hotspot location data from smart phones for localization

Web Developer & Visual Designer, Harvest Mission Community Church 2012 - NOW
 Executed iterative, user-centered design for non-profit organization's web presence
 Designed and developed PHP-based web applications in a 10-15 person team

Research Assistant, Natural Language Processing, University of Toronto 2009
 Built acoustic language model for speech recognition
 Processed lecture recording and broadcast news audio data for training speech recognizer

Software Developer, Google Summer of Code, University of Toronto SUMMER 2008
 Developed Eclipse plugin for a web-based computer science education tool
 Conducted usability study to understand grading habits of teaching assistants

TEACHING & SERVICE **Graduate Student Instructor**, University of Michigan 2012 - 2014
 Taught discussion sections for courses on interface design, and data structure & algorithms
 Tutored students and graded assignments and tests (class size: 70-300+)

Mentor, Prison Fellowship, W. J. Maxey Boy's Training School 2014 - NOW
 Mentored a youth through bi-weekly one-on-one meetings

Carillonneur, University of Michigan 2011 - 2013
 Prepared and played weekly carillon recitals for university bell towers
 Performed recitals at Bloomfield Hills, Detroit, and Ann Arbor

TECHNICAL SKILLS **Languages:** Python, Swift, Shell Script, Java, C/C++, Objective-C, Prolog, PHP+Javascript+CSS, MATLAB, Lua
Frameworks & Tools: Git, Processing, OpenFrameworks, Kinect + OpenCV, iOS, QT, NLTK, Sketch, Qualtrics

PUBLICATIONS *Representation-Plurality in Multi-Touch Mobile Visual Programming for Music* — Qi Yang, Georg Essl
In Proceedings of New Interfaces for Musical Expression (NIME), 2015

Evaluating Gesture-Augmented Piano Performance — Qi Yang, Georg Essl
Computer Music Journal, 2014

Visual Associations in Augmented Keyboard Performance — Qi Yang, Georg Essl
In Proceedings of New Interfaces for Musical Expression (NIME), 2013

Augmented Piano Performance using a Depth Camera — Qi Yang, Georg Essl
In Proceedings of New Interfaces for Musical Expression (NIME), 2012

SELECTED University of Michigan
COURSEWORK

EECS 545 Machine Learning: MATLAB
EECS 543 Knowledge-Based Systems: Lisp

University of Toronto

CSC 324 Programming Languages: Prolog, Caml
CSC 384 Introduction to Artificial Intelligence: Prolog
CSC 401 Natural Language Computing: Python, NLTK
CSC 420 Introduction to Image Understanding, Computer Vision: MATLAB
CSC 318 Interactive Computational Media, User-centered iterative design
TMU 325 Music for Live Electronics & Performer

HONOURS Natural Science and Engineering Research Council of Canada (NSERC)

Post-Graduate Scholarship (full funding) 2010
Undergraduate Student Research Award 2009 SUMMER

Others

Trinity College Academic Award 2008
Plettner Arthur Scholarship (Academic excellence in music) 2007
McBroom Robert and Jean Elliot Scholarship (Academic excellence in music) 2006
University of Toronto Scholar 2005

REFERENCES **Georg Essl**, Assistant Professor, Electrical Engineering & Computer Science and Music, University of Michigan
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Marisa Eisenberg, Assistant Professor, School of Public Health, University of Michigan
marisae@umich.edu

Peter Martel, Program Associate, American Friends Service Committee Michigan Criminal Justice Program
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