

EDUCATION

MIT Media Lab, Cambridge, MA

2015 – Master of Media Arts and Sciences

Focus – Game Design, machine learning, virtual reality, computer vision, AI, neuroscience of vision

NYU Interactive Telecommunications Program, New York, NY

2011 – Master of Professional Studies

Focus – Computer vision, 3D scanning, game design, networked objects, assistive technology

Reed College, Portland, OR

2002 – Bachelor of Arts

Focus – Art history, drawing, printmaking, math, and music

EXPERIENCE

Independent Game Designer 2015-2016

- *Designed, built, and playtested a browser-based game about managing a TV show*
- *Designed and playtested a language-based card game (upcoming)*
- *Designed, built, and playtested a casual game about the nuclear apocalypse*

Polaroid 2015-2016

Computer Vision and Design Research Consultant

- *Lead design and strategy workshop with company leaders*
- *Designed and implemented multiple computer vision interaction prototypes*
- *Helped shape company strategy and research agenda*
- *Trained team in computer vision and machine learning methodologies*

Minority Report 2014-2015

Futurist and Writer

- *Conducted extensive interviews with science and technology experts*
- *Prepared a World Bible communicating research to writing staff*
- *Participated extensively in writers' room discussions*
- *Co-wrote Episode 9, 'Memento Mori'*

Samsung Accelerator 2014

Consulting Technologist

- *Designed and built a face recognition and image evaluation system*
- *Trained team in computer vision and machine learning principles*

MIT Media Lab, Playful Systems Group 2013 to 2015

Researcher and Teacher

- *Designed, built, and playtested a hybrid digital-physical board game*
- *Designed, built, and playtested a collaborative GPS-based virtual reality game which was deployed at SXSW*
- *Collaborated with Chess grandmaster Maurice Ashley to build data science system for analyzing competitive chess*
- *Invented and designed a 3D image capture device for smartphones*
- *Collaborated with Sebastian Seung Neuroscience Lab on large-scale neuron labeling project*
- *Prototyped a machine learning system for automating the process of legal discovery*
- *Designed and taught a graduate-level course on Magic and Technology*

O'Reilly Media 2012 to 2014

Author and Consulting Technologist

- *Built a computer vision library for the Processing creative coding environment*
- *Wrote an online introductory computer vision tutorial*

Berg London 2012

Consulting Technologist

- Prototyped a 3D vision-based robotic toy for a large chip manufacturer
- Designed and built an object recognition system and game for a large toy company and a large electronics company

Estee Lauder 2012

Consulting Technologist

- Consulted on cosmetic retailing applications of face and body tracking

Makerbot Industries 2012

Consulting Technologist

- Designed and built the software and interface for a consumer 3D scanner

NYU ITP 2011-12

Adjunct Faculty and Resident Researcher

- Designed and taught a graduate-level class on the mathematical underpinnings of computer vision and digital fabrication
- Redesigned the web curriculum to use modern technologies

Author, Making Things See, O'Reilly Media 2011

- Wrote the industry standard introductory textbook for 3D scanning and body tracking with the Microsoft Kinect

Stepchange Group 2008-2009

Software Engineer

- Built and deployed a series of short term, high-traffic promotional Facebook applications
- Planned and oversaw a program of development process improvements and new hires

Grabb.it 2006-2008

Founder and CEO

- Raised funding for year-long startup development and deployment budget
- Designed and developed a web spidering operation and interactive music search site

PDX Pop! Now Annual Music Festival 2004-2009

Founder and Member, Board of Directors

- Organized five editions of a free all-ages three-day music festival featuring local bands
- Managed successful 501(c)(3) non-profit status application

SKILLS

Programming Ruby, Javascript, Node.js, Java, C++, Objective-C, C#/Unity, Python, library authorship, OSS participation

Game Design Individual and collaborative design of tabletop, tablet, casual, PC, and VR games. Organizing, leading, and analyzing results of playtesting sessions. Rapid prototyping and iteration on many platforms

Computer Vision Created and maintain an open source computer vision library, extensive interaction design work for vision-based systems and application of machine learning to vision-based problems

Data Science Practical skills in statistical analysis and experiment design for UX and game play analysis. Experience building machine learning workflows for practical interactive applications

Teaching Development of curriculum and teaching materials ranging from graduate-level course to single-day workshops. Excellent technical writing in formats from blog posts to full textbooks