

Andrew Ringler

Curricula Vitae


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andrewringler.com/cv (CV with links)

I am based in Boston in the United States. I create interactive public art installations that allow participants to create their own novel visual and auditory experiences. I challenge participants to invest time and effort learning new systems collaboratively, and through that investment receive the pride of achievement, and the joy of connecting with others.

Projects

Public and Gallery Exhibitions

2025—May 3 rd	Something Musical About Forms is an interactive musical instrument disguised as a form-entry activity as part of a single night immersive dystopian corporate office art event called DAWN of Compliance organized by also.does.stuff . more information .	DAWN
2021—November	Almost Mirror is wall mounted interactive display that encourages participants to enter more fully into consciousness the technical limitations of the medium of the full color digital display. Shown at Altered Realities produced by ArtSynergies at the Cotuit Center for the Arts from October 9 th —November 13 th 2021. more information .	Cotuit Center for the Arts
2021—October	Sound Squares is an abstract interactive experience where festival goers can create visuals and sounds by interacting with a freestanding outdoor screen. October 2 nd 2021 at the Somerville Ignite Festival in Union Square Somerville, Massachusetts. more information .	Somerville Arts Council
2020/2021	Union Video curator and technical support, video projection series, outdoor public projection, 3 months, Union Square, Somerville Massachusetts.	Somerville Arts Council
2019—December	City Built is an algorithmically generated line-drawn city skyline shown as a building facade projection November 15 th 2019—February 2020 in Union Square, Somerville Massachusetts. more information .	Somerville Arts Council
2019—November	Ghost Mirror is small wall mounted interactive screen that responds to people walking by. Shown at the Higgins Art Gallery At Cape Cod Community College as an invited guest of Scott Anderson. November 12 th —December 9 th 2019. more information .	Higgins Art Gallery
2019—September	můjemoji is a chat window projected on a building where visitors can chat live via a companion website using only emoji; installed for three nights in Valašské Meziříčí, Czech Republic (colloquially Valmez) during Světlo Valmez (September 6 th & 7 th 2019). Collaboration with Alyssa Laurel Ringler . more information .	Czech Republic
2019—May	Public Radio is a large giant outdoor working FM radio available to the public. Public Radio was conceived and designed by New American Public Art ; I was responsible for all electronics and programming. Installed May 2019 in Boston Seaport. more information .	Boston
2019—March	Neave Trio Visualizations are sound responsive projected visualizations created in collaboration with Bing Lin to accompany live concerts by the Neave Trio . 3/15/2019—Longy, Cambridge, Massachusetts. 6/15/2019—Praxis Fiber Gallery, Cleveland, Ohio. more information .	Neave Trio
2018—November	Slightly Structured Visual Noise is a sound responsive visual piece installed during the Cirque Noir Houston night festival on November 10 th 2018. more information .	Cirque Noir
2017—November	Wellspring Fords is an interactive projected digital river, installed for two nights in Downtown, Boston during the Illuminus Festival (November 3 rd & 4 th 2017). Collaboration with Cindy Sherman Bishop and Philip Gedarovich . more information .	ILLUMINUS
2017—October	Enchanted Forest is a magical interactive experience for all ages containing xylophones, spinny lights and singing birds. Installed for four days during the HUBWeek Immersion festival at City Hall Plaza, Boston. Collaboration with Fish McGill and Saul Baizman . more information .	HUB week

2017-August	Ignite Beats is an interactive fire and spice themed instrument enabling participants to compose music with synchronized visuals through the manipulation of blocks on a table (iteration of <i>Fruit Beets</i>). Collaboration with Philip Gedarovich . Shown at the <i>Somerville Ignite! Festival</i> . Shown at the <i>Clubhouse Network Teen Summit</i> 2018, Boston. more information .	Ignite!
2017—Spring	Art Screen Workshop is two parts. First, it is a public interactive display running 24/7. Second, it is a series of free workshops where I teach students of any level how to create new interactive art for the screen. more information .	CCTV
2016-December	Step to Hanukkah Lights celebrates Hanukkah, the Jewish Festival of Lights, by inviting the community to engage with an interactive menorah. Collaboration with Fish McGill and Saul Baizman . Shown at the Museum of Fine Arts Boston , December 14 th —30 th 2016. more information .	
2016-October	Fruit Beets is an interactive instrument enabling participants to compose music with synchronized visuals through the manipulation of fruits and vegetables on a table. Collaboration with Philip Gedarovich . Shown at the <i>Somerville Agricultural Festival</i> . more information .	Agricultural Festival
2016-September	Art Farm Fence is an installation of art on the Somerville Art Farm fence with lasercut acrylic fruit, vegetables and signage. Collaboration with Alyssa Ringler . more information .	Somerville Arts Council
2016-April	Sequencing adaption of <i>Sequencing Marbles</i> . <i>MEFA Thesis Exhibition 2016</i> at the Doran Gallery. more information .	MassArt
2016-March	Sequencing Marbles is real-time musical composition experience using marbles. Collaboration between myself and Patlapa Davivongsa . <i>Fresh Media 16'</i> at the Boston Cyberarts Gallery.	boston cyberarts
2016-March	Macropavilion is a public outdoor pavilion providing visitors with shade from the sun as well as an interactive LED light experience in Casco Viejo, Panama. Collaboration between myself, Valeria Lalinde and Miguel Espino. more information .	Panama City
2016-Jan	Adaption of Draw Blocks at the MassArt Design & Media Center opening ceremony. more information .	MassArt
2015-May	Draw Blocks is an interactive table-top play and design area allowing multiple participants to collaborate in creating projected images. Patterned wood blocks act as tools within a rich and learnable visual language. <i>Fresh Media 15'</i> at the Boston Cyberarts Gallery. more information .	boston cyberarts
2015-May	TinyVacay is an experimental web-app exploring the benefits of breath. <i>Fresh Media 15'</i> at the Boston Cyberarts Gallery. Collaboration between myself and Amy Jorgensen . more information .	boston cyberarts
2014-Fall	Curatorial Committee: Gaining Perspective: A Visual History of MassArt . MassArt President's Gallery, Boston City Hall, State House, Massart Design & Media Center. more information .	MassArt

Teaching

Teaching (Credit Courses)


2017-Fall	Physical Computing: new course creation & curriculum development. Experience design for physical computing, tangible user interface (TUI), augmented and virtual reality. Undergraduate-level studio.	Lesley
2016-Fall	Elements of Media: novel revision of previous curriculums. Graduate-level studio, focused on the synthesis of tactile, visual, oral, aural and temporal information within dynamic media. more information .	MassArt
2016-Fall	Web Design 1: adapted from <i>intro to web</i> , undergraduate level. more information .	MassArt
2015-Summer	Coding Dynamic Experiences: new course creation & curriculum development. Learn how to articulate and communicate your ideas through the medium of software code. Topics include culture & technology, social networks, design as social practice, and data visualization. more information .	MassArt
2015-Fall	Web 1: Designing and Building the Modern Web rename from <i>intro to web</i> . more information .	MassArt
2015-Spring	Introduction to Web Design: adapted course from previous curriculums. Introduction to web design, communication, and development using HTML, CSS and JS. more information .	MassArt

Teaching (Non-Credit & Workshops)

2018-August 3-days	Internet of Things (IoT) Co/Lab Three-day workshop on the Internet of Things (IoT) for engineering students in Chennai, India. Co-ran with Sidharth Bhatia. In collaboration with the Climber, MIT-India, IMEL@MIT.	Chennai, India
2017-Spring five weeks	Introduction to Javascript for Design New course creation & curriculum development. Learn to create dynamic interactions, animations, generative designs, simple games, data visualizations, and art with Javascript. For first-time programmers. more information .	MassArt
2017-Jan two weeks	Learn to Build Your Own Videogame with the Unity Game Engine and Microsoft Kinect Nine day workshop during MIT's IAP 2017. Co-led with Dr. Kyle Keane, Mark Vrablic and Abhinav Gandhi. more information .	MIT
2017-Jan two weeks	Collaborative Design With Arduino Nine day workshop during MIT's IAP 2017. Co-led with Dr. Kyle Keane, Mark Vrablic and Abhinav Gandhi. more information .	MIT
2016-Jan two weeks	Collaborative Design With Arduino Eight day workshop during MIT's IAP 2016. Co-led with Dr. Kyle Keane and Mark Vrablic. more information .	MIT

Engagements

2025-5-9	Talk titled " Something Musical About Forms " at the Boston Music & Tech Meetup.	MUSIC X TECH
2024-4-9	Guest Artist for Timothy Scholl & Fred Wolfink's Elements of Media course at the Dynamic Media Institute of MassArt	MassArt
2022-11-5	Workshop with Kyle Keane titled "Techniques to Improve Participation and Experience of Persons with Diverse Abilities" at the TransCultural Exchange 2022 .	TransCultural Exchange
2022-11-1	Guest Lecture on tangible interface programming for Kyle Keane's Principles and Practice of Assistive Technology (PPAT) course at MIT.	MIT
Fall—2022	Guest Artist focused on Processing for Bing Lin's course at Montclair State University.	MONTCLAIR STATE UNIVERSITY
2022-2-8	Guest Lecture on data visualization for Bing Lin's Information Design course at Montclair State University.	MONTCLAIR STATE UNIVERSITY
2019-2-5	Guest Lecture on data visualization for Martha Schwartz' Beyond Resilience and Adaption: Geoengineering & Why We May Need It at Harvard GSD.	Harvard

2018-June	DIAGRAM Code Sprint Coder during weekend long “codesprint” helping to make STEM education more accessible and inclusive for all learners. DIAGRAM Center, Benetech, U.S. Department of Education, Office of Special Education Programs. Sponsored by Microsoft. Sunnyvale, California.	DIAGRAM Center
2018-1-23	Git + Github Introduction to software version control, git and github for Saul Baizman's information architecture students.	MassArt
2017-11-19	xTalk <i>Digital Tools for Collaborative Learning</i> with Dr. Kyle Keane, Andrew Ringler, Mark Vrablic and Ian Kim Riley more information	MIT
2017-9-6	DMI TuneUp <i>Processing+Arduino Workshop</i> , digital and electronic platforms for prototyping. For incoming Dynamic Media Institute students.	MassArt
2016-11-19	Mentor for HackingArts ; an art and technology themed hackathon at the MIT Media Lab	MIT
2016-11-10	Guest Artist for Maker Night at Perkins School for the Blind; with Dr. Kyle Keane Designed, discussed, interacted with two tactile instruments: Fruit Beets and Bouncy Piano .	
2016-7-6	Artist Talk: <i>The Art of Composition or: How I Learned To Stop Programming and Love the UNIX Pipe</i> My art through the lens of UNIX pipes. MassArt-PCE Lecture Series. more information .	MassArt
2016-7-6	Artist Talk for Sejal Patel's <i>Teaching in New Media</i> course Inspiration, works, programming and a Scratch workshop. more information .	MassArt
2015-4-14	Guest Reviewer for <i>Graphic Design Senior Thesis Portfolio Reviews</i>	MassArt
2015-4-14	Guest Reviewer for <i>Information Architecture I</i> taught by Jan Kubasiewicz	MassArt
2015-8-19	Guest Reviewer for <i>Prototyping Lab</i> taught by Ceren Paydaş	MassArt
2015-1-15	Lecture: <i>Art+Code+Medium: How Different Software Languages & Libraries Affect Your Creative Process</i> Lecture and live-coding with audience participation. more information .	MIT
Other Teaching Experience		
2017-Spring	Mentor for MFA student Yiji He, for independent study	MassArt
2015-4-5	Substitute Teacher for <i>Senior Degree Project</i> taught by Jan Kubasiewicz	MassArt
2014-Fall	Teaching Assistant for <i>Visual Language</i> taught by Nance Davies	MassArt
2015-Spring	Teaching Assistant for <i>Information Architecture II</i> taught by Jan Kubasiewicz	MassArt
2000—2001	Teaching Assistant for <i>COMP-206</i> —operating system programming and <i>COMP-273</i> —assembly programming	McGill University

Research

- 2016—Present **Designer** at Code Seal; a programming, education literacy group.
- 2016—Present **Co-founder & Director of Design** at the Interactive Materials Education Laboratory (IMEL) at MIT; a research group in materials science at the intersection of technology, education, design, and public engagement. MIT
- 2016—Present **Research Affiliate** under Professor W. Craig Carter in MIT's Department of Materials Science and Engineering. Student advising, project development and outreach. MIT

Consulting Enagements

- 2018 **Autodesk Inventor VBA API** (Visual Basic) scripting for parts of the digital manufacturing pipeline for the Kempelen's Owls public art project.

Film Shorts (Producer / Director)

- 2010 **Everything In Its Place**
- 2008 **Dog Fight**
- 2007 **Something About Shoes** (documentary)
- 2006 **Happy as an Oyster**
- 1998 **The Assignment**
- 1998 **The Murder**
- 1996 **The Ping Pong Showdown**
- 1995 **Gulag**

Filmography (Other)

- 2008 **Urban Jumble** animations

Awards & Grants

- 2019 U.S. Embassy in Prague, Czech Republic project grant for **műj-emoji** interactive projection
- 2017 Cambridge Arts Council project grant for **Art Screen Workshop**
- 2016 Somerville Arts Council project grant for **Art Farm Fence**

Additional Work Experience (selected)

+ ongoing consulting

2024—Present	Owner at Happen Interactive , Somerville MA -Founder of Happen Interactive, an art technology solutions company. Specializing in the design and fabrication of interactive experiences leveraging sensors, light, sound, computers, electronics and code.	Happen
2015—Present	Artist, Digital, Embedded, Physical (see andrewringler.com for projects) -Digital electronic instruments design Embedded Linux , FreeRTOS , Yocto , Arduino -Code & web Processing , PHP , node.js , Android , Openframeworks , Arduino , Raspberry Pi & Electronics -Performance, event and installation of public interactive art. Software , Hardware & Sculpture	Somerville
2022-Summer	Senior Software Engineer at Scatter, Brooklyn NY -DepthKit development, 3d volumetric capture C++ , OpenGL	scatter
2018—2022	Data Visualization Scientist at Payette, Boston MA -Interactive Experience design and installation. Python Linux Embedded -Data visualization, communication and analysis Tableau Power BI SQL Python/d3 -Internal & public software Full-stack React & node.js on Azure	PAYETTE
2007—2014+	Senior Software Developer at Icosystem, Cambridge MA -Web Full-stack web on PlayFramework (Java & Scala) -Desktop application design and development Scala/Java/Swing -Predictive analytics, simulations (agent-based model), search (genetic algorithms), data analysis, data visualization	ICOSYSTEM
2006—2007	Owner of Aspen Advanced Technologies, Aspen, CO; Boston, MA -Custom home automation services (audio/video) & Scientific programming. C++ , PHP	Aspen Tech.
2005—2006+	Home Automation Programmer at Electronic Systems Consultants, Aspen, CO -Programming of integrated residential control systems— VxWorks , AMX , DMX , IR , RS-232 , Audio & Video	E S C
2004—2005+	Systems Architect at Think Development, Aspen, CO -Design, and programing of custom retail point-of-sale, inventory and reporting systems	THINK
1998—2004	Shorter Engagements -Environmental simulations; nitrogen flows, PHP —BUMP MBL, Woods Hole, MA -Neurological event classifier, C++ —Felix Strumwasser, Woods Hole, MA -Research assistant, KNN, C++ —Professor Robert Snapp UVM, Burlington, VT -Research Intern—C-Map USA, Mashpee, MA	

Skills

CODE	JavaScript, Python, Java, Scala, Swift, C, C++, C#, Visual Basic Mathematica, Matlab Bash, Groovy
WEB	accessible, standards-based, responsive, full-stack (back-end & front-end) node.js, expressjs, Play (Java/Scala)/PHP Wordpress PHP Theme & Plugin React, Vue, Svelte
DATABASE	MySQL, PostgreSQL, MongoDB, Redis, SQL Server
AUDIO & VIDEO	Processing, p5.js, openFrameworks, Max/MSP/Jitter MIDI, OSC screen, projection mapping (MadMapper/ofxPiMapper) AR, Fiducial, QR computer vision, ML, 2D & 3D sensors (Kinect/Leap) SuperCollider, Tidal Cycles, sound synthesis, sound analysis
PHYSICAL	microcontroller (Arduino, ESP8266) embedded Linux (Raspberry Pi) light & led (WS2812B, APA102, Hue, DMX, 12V analog) SPI, I2C, RS-232, RS-485, IR communication (networking, mesh, wifi, bluetooth, IR) API, IPC, RPC, UART, ADC, DAC analog & digital sensors
SYSTEM	macOS, IOS, Windows, Linux, Android openCV, Unity, WebGL, OpenGL
DATAVIZ	Tableau, PowerBI, d3, NodeBox
OPS	Azure, AWS, Heroku Docker, Vagrant, VirtualBox
ORG	Agile, Pivotal & Jira git, SVN, CVS
DIGI-FAB	laser cutting, CNC cutting, plasma CNC, vinyl cutting, 3D Printing
CAD	Grasshopper, Dynamo Rhino, Autodesk Fusion 360 & Inventor, OpenSCAD

Education

Massachusetts College of Art and Design at the Dynamic Media Institute

Master of Fine Arts in Design, 2016

Thesis: “Please Challenge, Create Fun.” ([Abstract and PDF](#))

McGill University

B.Sc, Honors Computer Science, 2003

Papers of interest:

- “Texture Segmentation by Local Fractal Dimension as applied to Oceanic Search and Rescue” ([PDF](#))
- “Analysis of a Content-Based Image Retrieval System using a Weighted K-Nearest Neighbor Classifier on Multiple-Example Image Queries” ([PDF](#))

Other Passions

Design, drawing, Improv, acting, filmmaking, sailing, skiing, mountain biking, hiking, bouldering and trapeze.