

Ellen Lo

A computer engineer interested in creating at the intersection of software and hardware and storytelling with aesthetic compositions

[Portfolio](#) / [Github](#) / [Linkedin](#)

Boston, MA
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EDUCATION

Boston University Boston, MA
Bachelor of Science in Computer Engineering
GPA — 3.50

Expected May 2019

EXPERIENCE

Volvox Labs, New York, NY

May - Aug 2018

Developer Intern

Developed sound-reactive and distance-reactive installations ([Motion](#) and Fluid) using Arduino, Raspberry Pi, servo motors, programmable LEDs, PixelPusher and LiDAR sensors.
Experimented with kinetic lights and power winch system via DMX communication protocol with TouchDesigner.

Boston University School of Theatre, Boston, MA

Sep 2018 - Present

Creative Developer

Designed and developed series of immersive, generative graphics with Processing and openFrameworks for Clay Hopper's theatrical adaptation of George Orwell's dystopian novel 1984.
Implemented computer vision algorithms with Kinect and OpenCV libraries to track actors' gestures and map them into interactive graphics.

pill & pillow, Hong Kong

Jun - Aug 2017

Programmer Intern

Developed [experimental VR projects](#) with HTC Vive and Leap Motion in Unity as a means to expand client market.
Created experience design prototypes with openFrameworks and Screenflow for [Very Hong Kong Very Hong Kong exhibition website](#).

Boston University Image and Video Computing Group, Boston, MA

Feb - May 2018

Undergraduate Research Assistant

Implemented head gestures recognition model with OpenCV to map user commands such as selecting and cancelling for people with motor impairments.
Processed user gaze data given by Tobii Eye Tracker and mapped gaze location to components on Qt interface for selection.

PROJECTS

Axis Mundi (Front-end development) In progress

Using HTML5, CSS3, and jQuery to create interactive website for a hypothetical exhibition Axis Mundi featuring my artworks Fluid and Motion <https://bit.ly/2PnMPvy>

StreetArtPhobiaPhobia (Augmented Reality experience) In progress

Using ARKit to create augmented street art on Hong Kong urban landscape as a response to the government ripping off French undercover artist Space Invader's mosaics

Motion (Kinetic sculpture)

Using Arduino, servo motors, and various fabrication technologies to create a kinetic sculpture that embodies the motion of sea waves <https://bit.ly/2PGSsRE>

Fluid (Interactive installation)

Using programmable LEDs, LiDAR, and TouchDesigner to create an interactive installation that represents fluid as an everchanging form
<https://bit.ly/2PzMiFK> (password: fluid)

Virtual Ball Pit (Virtual Reality experience)

Using Unity (C#) and HTC Vive to create an immersive ball pit in virtual reality <http://bit.ly/2DXOHVU>

woodpeckersPro (Physical computing)

Using Arduino, sensors, and electronic components to build a device that detects and deters woodpeckers for house protection <http://bit.ly/2osEBQd>

Embedded Pong (Physical computing)

Using Kinect and QT to create a single player motion-controlled Pong game on LCD screen through Gumstix <http://bit.ly/2s57Z69>

Portfolio site design (Front-end development)

Using HTML5, CSS3, and Three.js to create portfolio site <http://bit.ly/2GKJwqa>

SKILLS

Creative openFrameworks, Processing, TouchDesigner, Arduino, Raspberry Pi, Max/MSP, Unity, Three.js, OpenGL

Programming C/C++, Python, OpenCV, Javascript, node.js, Qt, Matlab

Language Cantonese (native), English (fluent), Mandarin (fluent), Japanese (conversational)

**HONORS &
LEADERSHIP**

Dean's List in Boston University College of Engineering, Fall and Spring '17, and Fall '18

President in Bulletproof Funk, Boston University, 2016 - 2018