Ellen Lo

A computer engineer passionate about creating embedded and digital solutions to reimagine experience and storytelling

Portfolio / Github / Linkedin

Boston, MA
857-204-8638
lowing@bu.edu

EDUCATION

Boston University Boston, MA — Expected May 2019
Bachelor of Science in Computer Engineering
GPA — 3.50

EXPERIENCE

Boston University School of Theatre, Boston, MA — Sep 2018 - Present
Creative Developer
Designed and developed series of immersive, generative graphics with 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, which are used as a parameter for graphics control.

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.
Experimented with kinetic lights and power winch system via DMX communication protocol with TouchDesigner.

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.
Developed Qt application that processed user gaze data provided by Tobii Eye Tracker for interface component selection task.

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.

PROJECTS

Motion (Kinetic sculpture) Code / Video
Using Arduino, servo motors, and various fabrication technologies to create a kinetic sculpture that embodies the motion of sea waves

Fluid (Interactive installation) Video
Using programmable LEDs, LiDAR, and TouchDesigner to create an interactive installation that represents fluid as an everchanging form

Axis Mundi (Front-end development) Code / Site
Using HTML5, CSS3, and jQuery to create interactive website for a hypothetical exhibition Axis Mundi featuring my artworks Fluid and Motion

Lost Code (Front-end development) Code / Site
Using Paper.js and explicit depth sorting of HTML elements to create interactive website for a graphic design project that explores the friction in translation

Portfolio site design (Front-end development) Code / Site
Using HTML5, CSS3, and Three.js to create portfolio site

Experiments with Huzzah (IoT experiments) Code / Video
Using Adafruit ESP32-based Huzzah board, server-side scripting with Node.js and NoSQL and various electronics to create a series of smart system prototypes, such as self-driving car, smart key, and remote control car

Cambridge Public Art (Data Visualization) Code
Using ReactJS, D3.js, and HTML5 canvas to create interactive visualization for public art dataset of Cambridge Open Data

Virtual Ball Pit (Virtual Reality experience) Code / Video
Using Unity (C#) and HTC Vive to create an immersive ball pit in virtual reality

SKILLS

Programming C/C++, Python, OpenCV, Javascript, React.js, Node.js, NoSQL, Qt
Creative openFrameworks, Processing, TouchDesigner, Arduino, Raspberry Pi, Max/MSP, Unity, Three.js, D3.js, p5.js, Paper.js, HTML5 canvas, CSS, OpenGL, Sketch
Language Cantonese (native), English (fluent), Mandarin (fluent), Japanese (conversational)