AMY QIU
PROGRAMMER, GRAPHIC DESIGNER, HARDWARE HOBBYIST

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☉ Lixire

» PROJECTS «

PIPETTE AUTOMATION ROBOT : DELTAHACKS II
- Worked in a team of three to build a 1D Cartesian robot that can transfer chemicals in precise amounts to sample test tubes
- Designed and built the nozzle mechanism using a dremel

LIGHT PAINTER : HACK WESTERN 2015
- Worked in a team of four to build a 3D light painter arm using forward kinematics for long exposure photos
- Used delta formation for robot arms for efficiency and simpler wiring
- Mainly worked on solving the inverse kinematics and built the stabilizers
- Built using eight Mountain Dew cans, servos, LEDs, an arduino, and hot glue

PEBBLE TEXT EDITOR : TERRIBLE HACKS 2015
- Created a simple text editor app for the pebble watch
- Learned JavaScript in four hours in order to create it

CONVERSATION ENDER
- Procedurally generates witty phrases to end awkward conversations
- Built using HTML/CSS and JQuery

ASCENSION
- Worked with a partner to build a turn-based tile RPG in Java over 2 months
- Implemented procedurally built dungeon rooms
- Includes a leveling system, items, and randomly spawning monsters

EDGE OF TWILIGHT
- Worked with a partner to build a Binding of Isaac-like rogue shooter
- Implemented AI using the A* path-finding algorithm
- Written in Python and PyGame

» EMPLOYMENT «

Great Lakes Institute for Environmental Research — 2012 to 2014
LAB ASSOCIATE
University of Windsor
- Prepared and ran samples for various clients by: extracting lipids using chloroform, freeze-drying samples, and meticulously loading an elemental combustion system
- Used Isodat Acquisition software to analyse carbon-nitrogen ratios in order to determine area of origin
- Drilled shark and sturgeon vertebrae cross-sections to determine growth rates during pup years

Graduate Control and Robotics Lab — 2014
ENGINEERING SUMMER INTERN
University of Windsor
- Analysed path-optimizing programs in MATLAB
- Designed a laboratory website and logo
- Read and discussed various Ph.D. candidates' dissertations

» EDUCATION «

University of Waterloo
1B Honors Computer Science Co-op 2020

» SKILLS «

PROFICIENT	FAMILIAR
Java	AJAX
Python	JQuery
HTML/CSS	C
Scheme	JavaScript
GIMP	MATLAB
Photoshop	Git
LaTeX	Arduino

» AWARDS «

University of Waterloo — 2015
J. WESLEY GRAHAM NATIONAL SCHOLARSHIP
- Up to 15 awarded nationally for distinguished math and computer science performance

University of Waterloo — 2015
TERM DEAN'S HONOURS LIST
- Awarded to students with at least a 87% term average

Educational Computing Organization of Ontario — 2014
ECOO COMPUTING CONTEST
- Led an all-female team through a competition focused on solving algorithm-based computing questions

University of Waterloo — 2013
CANADIAN SENIOR MATHEMATICS CONTEST
- Placed 50th out of 7816 students nationally on a full-solution math contest