AMY QIU

PROGRAMMER, GRAPHIC DESIGNER, HARDWARE HOBBYIST

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» PROJECTS «

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
- Mainly worked on solving the inverse kinematics and built the stabilizers
- Built using eight Mountain Dew cans, servos, LEDs, an arduino, and hot glue

EAST OF CELLS : HACK WESTERN 2015

- Worked with a partner to create a top-down shooter with a biology theme
- Created the art assets and planned the project
- Written in Lua and LÖVE

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
- Implemented procedurally built dungeon rooms
- Includes a leveling system, items, and randomly spawning monsters
- Built in Java over the course of two months

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 «

University of Windsor 2012 to 2014
LAB ASSOCIATE
Great Lakes Institute for Environmental Research

Prepared and ran samples for various clients by:
- Extracting lipids
- Freeze-drying samples
- Loading an elemental combustion system for sample runs

Used Isodat Acquisition software to:
- Analyse carbon-nitrogen ratios to determine area of origin

Drilled shark and sturgeon vertebrae cross-sections to:
- determine growth rates during pup years

University of Windsor 2014
ENGINEERING SUMMER INTERN
Graduate Control and Robotics Lab

- 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 to students with:
- Distinguished academic performance
- Distinguished results from Mathematics or Computer Science competitions
- Participation in mathematics or computer science beyond standard course requirements

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