AMY QIU
PROGRAMMER, GRAPHIC DESIGNER, HARDWARE HOBBYIST

+ PROJECTS

Light Painter - Hack Western
- Worked in a team of four to build a 3D long exposure light painting arm using forward kinematics
- Mainly worked on solving the inverse kinematics and built the stabilizers
- Built using three Mountain Dew cans, servos, LEDs, an arduino, and hot glue

East of Cells - Hack Western
- 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
- Created a simple text editor app for the pebble watch
- Learnt JavaScript in four hours in order to create it

Conversation Ender
- Procedurally generates witty phrases in order to end awkward conversations
- Built using HTML/CSS and JQuery

Ascension
- Worked with a partner to build a turn-based, tile RPG with 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

+ AWARDS

University of Waterloo · J. Wesley Graham National Scholarship   2015
Up to 15 awarded nationally to students with:
- Distinguished academic performance
- Distinguished results from Mathematics or Computer Science competitions from previous years
- Participation in mathematics or computer science beyond standard course requirements

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

University of Waterloo · Canadian Senior Mathematics Contest   2013
- Placed 50th out of 7816 students nationally on a full-solution math contest

+ CONTACT

- ✉ alqiu@uwaterloo.ca
- 🌐 amyqiu.me
- ☎ (519) 903-4567
- ⌥ Lixire

+ 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

+ EMPLOYMENT

Great Lakes Institute for Environmental Research
Lab Associate   2012 to 2014
University of Windsor

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

Used Isodat Acquisition software to:
- Analyse carbon-nitrogen ratios

Drilled shark and sturgeon vertebrae:
- To determine growth rates during pup years

Control and Robotics Lab
Engineering Summer Intern   2014
University of Windsor
- Analysed path-optimizing programs in MATLAB
- Designed a laboratory website
- Read and discussed Ph.D. candidates' dissertations