Alan Guo

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Design. Deliberate. Develop.

Proficiencies:

- Python
- Javascript
- Adobe CC
- MATLAB
- HTML/CSS
- C

Javascript Frameworks:
React.js
Redux.js
p5.js

Relevant Coursework:

15-112, Fundamentals of Programming

15-122, Principles of Imperative Programming

15-539, Computer Science Pedagogy

27-515, Introduction to Computational Materials Science

Carnegie Mellon University, graduating May 2019
B.S. in Materials Science and Engineering, Minor in Computer Science

Phillips Exeter Academy, graduated June 2014

Experience

15-112 Teaching Assistant, Carnegie Mellon University Jan. 2017 - Current
- Teach beginner and intermediate programming fundamentals in Python
- Rapidly debug and troubleshoot student code in office hours
- Teach, manage, and supervise 30-student section recitation

Research Assistant, Morphing Matter Lab, CMU HCII Sept. 2017 - Current
- Studied and developed shape-memory transformative textile systems
- Led in-lab project to design a full fashion line for Lunar Gala 2018

Research Assistant, Carnegie Mellon University June 2017 - Current
- Determination of phase-separation temperature in symmetric polymer blends
- Utilized optical microscopy to characterize LCST behavior of polymer thin films
- Used OpenCV Python scripting to identify centroidal voronoi tesselations

Computer Science Teaching Assistant, SAMS CMU June 2017 - Aug. 2017
- Oversaw and taught two 60-person sections of underprivileged students

Creative Work

Student Designer, Lunar Gala 2018 Oct. 2017 - Current
- Conceptualized and sketched a 10-look portfolio for a February 2018 show
- Finalized a line showcasing the potential of transformative textiles in fashion
- Synthesize and research novel shape-memory textile production methods

Projects

Frontend Developer, CMU CS Academy, 15-539: CS Pedagogy
- Used React.js and Redux.js to develop frontend interface for student learning
- Integrated Vimeo API into React and Redux to create a quizzing component
- Established content video production workflow and editing techniques

Texas Hold'em, 15-112: Fundamentals of Programming Term Project
- Created a fully-functional, poker AI and 1-player game in Python in one week

Grain Growth Model, 27-515: Introduction to Computational Materials Science
- Implemented cellular automata modeling techniques in MATLAB
- Modeled recrystallization, phase transformations and mesoscale processes

Foreign Languages: Chinese (conversational proficiency)
Involvement: CMU Street Styles (president), Korean-American Students' Association