Diane Yang
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EDUCATION

Harvard University *A.B. in Computer Science, expected May 2016*
Coursework includes: Computational Photography (currently enrolled), Computer Graphics, Computational Fabrication, Systems Programming & Machine Organization, Data Structures & Algorithms, Linear Algebra, Multivariable Calculus

TECHNICAL SKILLS

Python, C/C++, CoffeeScript, JavaScript, MATLAB, OCaml, HTML, CSS, Django, Ember.js, Backbone.js, Git, OpenGL, OpenSCAD

PROJECTS

Mesh smoothing - Implemented half-edge mesh data structure and Laplacian mesh smoothing with cotangent weights. Written in C++.
4-bar linkage curve matching - Users draw desired path with Bezier splines. Genetic algorithm outputs linkage that traces similar path. Written in MATLAB.
Collision simulator - Simulates dropping hundreds of cubes into a box. Uses grid data structure for $O(n)$ collision detection. Written in C++ with OpenGL.
Harvard Food Finder - Bayesian classification algorithm trained to recognize emails that mention free food opportunities on campus, written in Python.
Textify - Neural network for optical character recognition. Written in Python.

EXPERIENCE

Research Assistant *MIT CSAIL - Computer Graphics Group*   Fall 2015
- Work on physical-simulation-based project for computational fabrication.

Software Engineering Intern *Addepar*   Summer 2015
- Implement front-end features for wealth management platform using Ember.js.
- Extended Ember Tables library to support pivot tables.
- Built interface for exporting Addepar data into general ledger accounting software and integrated it with back-end API.

Tech Board Member *The Harvard Advocate*   Spring 2015 - Present
- Use Django to build website for nation's oldest literary and arts magazine.
- Built internal tool for customer relationship management. Enables users to sort through donors and subscribers and keep track of interactions.

Software Engineering Intern *HubSpot*   Summer 2014
- Front-end developer for HubSpot's marketing-optimized publishing platform.
- Improved performance of a suite of dashboards by rewriting them from server-side generated pages to static Backbone.js apps integrated with a RESTful API.
- Project launched in August 2014 to over 5000 customer portals.

Teaching Fellow *Computer Science 51 (Abstraction and Design)*   Spring 2014
- Taught weekly 1.5-hour sections, held office hours, and graded assignments.
- Course covers functional and object oriented programming, as well as good practices for writing readable and maintanable code. Exercises in OCaml.

Software Engineering Intern *HubSpot*   Summer 2013
- Refactored Selenium integration tests by implementing page objects design pattern, making integration tests more readable, maintainable, and easier to write.
- Built end-to-end features for managing settings for HubSpot's publishing platform.

ART & DESIGN Began formal art training at age 8. Portfolio available at dianeyang.carbonmade.com.