MELANIE CEBULA

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email:
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github:
www.github.com/melaniecebula
(private projects on bitbucket)

education University of California, Berkeley

3.76 GPA B.A. Computer Science, May 2016

experience Facebook, Intern (2013, 2014)

iOS team (2013)
worked with iOS7, XCode5,messages
Ads & Pages team (2014)
new feature for page admins

University of California, Berkeley
CS 61B TA (current), Head Reader ('14)
CS 61A Reader, Lab Assistant ('14)

select projects (team size)

movie mashup (2): Used markov chains to mash together the plots of two different movies. Used a naive bayes classifier (from nltk) to determine the main character's names from both plots and only use one of them (for more mashup fun). Best Way to Spend a Saturday Night at HackJam

colorize Prokudin-Gorskii (solo): Aligning old Russian photographs taken in different color channels to produce a color photograph. Implemented difference-of gaussians filter, north/east filter, image pyramid algorithm, several optimizations for fast computation, automatic contrast and cropping, white balance, and applied the same techniques to NASA photographs. CS 194-26 Class Choice Finalist

fb_graph (solo): A speed hack that uses d3.js to visualize my facebook friend graph

instarecipe (2): Another speed hack that displays instagram photos of food that include recipes in the description using instagram API. Best Use of APIs/Frameworks at HackJam

PokePon (4): Built a 2-player pokemon rhythm game where the host chooses a song from SoundCloud, and each player must press specific keys to the beat of the song in order to perform different moves successfully. Best Use of Firebase API at Penn Apps

A Pyramid Scheme (solo): Built a Scheme interpreter in Python, added 3d graphics functionality to python turtle graphics module using perspective projection and other cool maths. Recreated Sierpinski's Triangles in 3d, written entirely in Scheme. 1st place CS61A Scheme Art Contest

Geo.ly (3): Real-time navigation web app to find your friends using HTML5 geolocation and Google Maps API. A compass directs you to your friend's location, while the map updates to show your locations relative to each other.

Boxel (3): Open source contribution to voxel.js, a voxel game (read: minecraft clone) built with full-stack javascript in the browser. Implemented a Capture the Flag game for the multiplayer server, specifically handling the team and game logic.

Rate My Cat (3): Built a website where users can submit and view cat pictures that are ranked byviews. Built using Flask (Python Microframework), and mongoDB for the database. Won 'Learned the Most' prize at HackJam

leadership

Hackers@Berkeley officer (Workshops Committee); CS 61B Course Staff (Undergraduate TA)

skills and technologies

Python, Javascript, Java, Objective-C, iOS, C, Matlab, Scheme, git, CSS, HTML, AWS (EC2)

coursework

Algorithms, Computational Photography, Artificial Intelligence, Computer Architecture, Data Structures, Discrete Mathematics and Probability, Linear Algebra