HOWARD ANH HAO NGUYEN

619-817-1456
howardanguyen@berkeley.edu
howardanguyen.com

University of California, Berkeley, EECS
Expected Graduation Date: May 2015

SKILLS SUMMARY

- **Proficient with:** Python, Java, Arduino (Processing), Scheme, HTML5/CSS3, MATLAB
- **Familiar with:** C, C++, Scala, D3.js, node.js, Django, Flask, JavaScript/jQuery, basic Angular, MIPS assembly, angular.js, SQL, PostgreSQL, Redis, Dust.js, Flot.js
- **Relevant course work:** Data Structures and Algorithms, Discrete Mathematics and Probability Theory, Efficient Algorithms and Intractable Problems, Machine Structures, Artificial Intelligence, Computer Graphics, Database Systems

WORK AND TECHNICAL EXPERIENCE

Natero, Software Intern 6/2014-8/2014

- **Cohort analysis:** tracked behavior of user specified groups over time
  - Wrote the JSON precompiler needed to automatically generate configuration blobs that were used to chain Hadoop MapReduce jobs
  - Implemented visualization of retention rates, period trends, and "layer-cake" plots
- **Redis Cache:** cached frontend DB queries to decrease DB load and decrease disk time
  - Created a custom LRU cache with locking and garbage collection in allow for parallel reads and writes

Berkeley CITRUS Lab, Software Intern 5/2013 – Present

- Researched, designed, and created prototypes for hand-powered, small-scale electric power generators (i.e. – bicycle pump generator and piezoelectric shoes)

CS61A, Academic Intern 8/2013 – Present

- Teach students introductory computer science concepts such as recursion, iteration, OOP, inheritance, and abstraction

Roboops, Member 8/2013 – Present

- Designing and testing a Mars rover robot that will be operated in Texas from Berkeley. Created the GUI and implemented the bulk of the color detection algorithms.

Flowbit, Hardware and Software Intern 7/2013 – 9/2013

- Designed Arduino to remotely monitor water usage. Programmed Arduino to send SMS, receive GPS location, and process flow meter data; optimized to minimize power usage

PROJECTS

- **Sphinx:** a visualizing tool that and performs analysis (regression, p-test, Pearson's coefficient, etc) on any arbitrary pairs of input
- **Yelp Wannabe:** scrapes Yelp based on query and decides on a restaurant based on user preferences, read Yelp reviews to try and determine satisfaction
- **CaptchaMeNot:** a captcha reader built in MATLAB that performed used histogram projections to implement OCR
- **RapCloud:** implements longest common subsequence algorithm to visualize the most common phrases said by various rappers
- **K-Colors:** used K-means clustering algorithm to render the most prominent colors in a picture