David Tsai

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Education

University of California, Berkeley Fall 2013 - present
Bachelor of Arts, Computer Science (expected May 2017)

Coursework

Artificial Intelligence, OS and Systems Programming, Algorithms, Data Structures, Computer Architecture, Microelectronic Circuits, Linear Algebra, Probability Theory, Engineering Statistics (Spring 2016), Databases (Spring 2016), Machine Learning (Spring 2016)

Experience

Project Team Lead - Systems October 2015 - present
Berkeley Unmanned Driving and Sensing
Direct the systems team of the BUDAS autonomous golf cart project.
Develop the computational hardware and software platforms needed to interface and synchronize the cart's sensing, vision, control, and output modules.

Undergraduate Research Assistant September 2015 - present
UC Berkeley
Build requisite software for projects and papers under Eric Paulos, currently developing OnePhoto, an Android application that takes a single photo and only displays it thereafter.

Project Advisory Board September 2015 - present
Robotics@Berkeley
Provide technical, logistical advising for projects involved in the R@B sponsorship process.
Design and host technical workshops in topics related to robotics.

Academic Intern - CS 61A June 2015 - August 2015
UC Berkeley
Assisted with teaching programming concepts and Python topics to students.
Coached students in problem-solving techniques and debugged their projects and homework during office hours.

Projects

tasilb.me *(Fall 2015, ongoing)*
Currently maintaining a Jekyll-based personal website hosted on Github Pages featuring a technical blog, links to things I've worked on, and information about me.
Next steps include further styling, more detailed information, and additional blog content.

Pixel Plots *(CS 98 project, Fall 2014)*
Deployed a Rails application to Heroku where users create simple pixel art in their browsers via DOM interaction and publish them to the site's front page for others to vote on.

Sliding block puzzle solver *(CS 61C project, Fall 2014)*
Wrote MapReduce code via the Apache Spark Python API to strongly solve sliding block puzzles using parallel computing and deployed it to Amazon EC2 instances provided by the course staff in order to benchmark it.

Huffman compression utility *(CS 61BL project, Summer 2014)*
Wrote a command line utility in Java that can encode and decode input files using the Huffman algorithm.

Skills

Programming Languages: Python, C, Java, JavaScript, Processing, MIPS, x86
Web: Ruby on Rails, Meteor, jQuery, HTML/CSS, Jekyll
Tools and Platforms: Git, Apache Spark, Amazon EC2, Android