David Tsai

dtsai@berkeley.edu
408.480.8634
github.com/tasilb

Education

University of California, Berkeley Aug. 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

Core Leadership Sep. 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.

Systems Lead Developer Oct. 2015 - Feb. 2016
Berkeley Unmanned Driving and Sensing
Directed the systems team of an autonomous golf cart project.
Developed the computational hardware and software platforms needed to interface and synchronize the cart's sensing, vision, control, and output modules.

Undergraduate Research Assistant Sep. 2015 - Feb. 2016
UC Berkeley
Built requisite software for projects and papers under Eric Paulos, worked on OnePhoto, an Android application that takes a single photo and only displays it thereafter.

Academic Intern - CS 61A Jun. 2015 - Aug. 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.
Working on styling and additional blog content.

MNIST SVM digit classifier *(CS 189 project, Spring 2016)*
Entered an in-class Kaggle competition to classify digits from the MNIST dataset. Implemented a linear SVM classifier using scikit-learn. Employed 10-fold cross-validation for tuning the C hyperparameter.

PintOS *(CS 162 project, Fall 2015)*
Enchanced the feature set of the PintOS dummy OS in C. Implemented a multi-level feedback scheduler, a Unix-like inode file system, and added user program functionality.

Sliding block puzzle solver *(CS 61C project, Fall 2014)*
Used Apache PySpark and MapReduce to strongly solve sliding block puzzles in parallel. Deployed to Amazon EC2 instances provided by the course staff and benchmarked it.

Skills

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