Giulio Zhou

giuliozhou8@gmail.com | 925.997.8192

EDUCATION

UC BERKELEY

BA in Computer Science
Expected May 2016 | Berkeley, CA
Minor in Chemical Engineering
Dean's Honor List (Spring 2013-2015)
Cum. GPA: 3.88 / 4.0
Major GPA: 3.96 / 4.0

COURSEWORK

Artificial Intelligence
Machine Learning
Computer Networking
Data Structures
Algorithms
Machine Architecture
Discrete Math
Probability Theory
Multivariable Calculus
Linear Algebra
Microelectronic Circuits

In Progress:
Operating Systems
Computer Vision
Advanced Probability

ABOUT ME

I am a fourth year Computer Science student with a passion for artificial intelligence and machine learning. My long-term work and research interests lie in applying these fields to push the boundaries of emerging technologies. I consider myself a curious tinkerer, an aspiring architect and most of all, a lifelong learner.

LINKS

Github: **giulio-zhou**
LinkedIn: **giuliozhou**

SKILLS

PROGRAMMING

Java • Python • Matlab • C/C++
HTML/CSS/JS • Django • LaTeX

WORKFLOW

Git • Vim • Unix • EC2
Trac • Gerrit • Eclipse

EXPERIENCE

GOOGLE | Software Engineering Intern

May 2015 - August 2015 | Mountain View, CA

- Worked on Display Ad Automation Team to improve the quality of Native Ads
- Designed and built a backend pipeline for high-quality automated text-to-image matching for non-English display ads
- Developed quality visualization tools and deployed non-English Native Ads, doubling overall coverage

TAU BETA PI | Web Development Lead

Dec 2014 - Present | tbp.berkeley.edu

- Oversaw a 4-member team in Django full-stack development
- Maintained a strict code review system, requiring comprehensive unit-testing and style adherence

RESEARCH

CENTER FOR INTELLIGENT SYSTEMS

Feb 2015 - Present | Berkeley, CA

- Worked under Stuart Russell on sampling algorithms for Bayesian LOGic, an open-universe probabilistic modeling language
- Applied an online EM algorithm to solve a Gaussian mixture model for image segmentation in video sequences

COLLEGE OF CHEMISTRY, ALIVISATOS GROUP

Jan 2014 – Dec 2014 | Berkeley, CA

- Utilized gradient descent optimization and generalized moments method to simulate the optical and mechanical properties of tetrapod nanocrystals
- Publication in progress[1]

PROJECTS

Face Detection Neural Network (Python)

- Trained a neural network to perform face detection, augmented with skin detection pre-processing and advanced feature extraction

Computational Photography Projects (Python)

- Face/image morphing across pre-defined and automatically detected meshes
- Content-aware image resizing and object removal using seam carving
- Multiresolution blending using Gaussian and Laplacian stack decomposition

RelationshipGuruBot (Python, Java)

- An automatic question-answering/relationship advice bot which crawls Reddit and generates a serious or non-serious response using a Markov Chain

Raycasting Graphical Engine (C++, OpenGL)

- Designed a 3D game engine employing raycasting visualization
- Created a maze generation procedure using a randomized variant of Prim's algorithm

PUBLICATIONS

[1] Shilpa N. Raja, Danylo Zherebetskyy, **Giulio Zhou**, Andrew C. K. Olson, Robert O. Ritchie, Ting Xu, Lin-Wang Wang, A. Paul Alivisatos. *Blue-shifting Tetrapod Nanocrystal Stress-Sensing Nanocomposites With Unparalleled Optomechanical Agreement and Sensitivity*.