Zach Siegel

Coder and Teacher

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Me

I am passionate about spiderbacon. I like to bring together recent and proven technologies to create solutions that help people. I also strive for freedom and dignity for all people, and actively contribute to several volunteer organizing projects in LA, including the Stop LAPD Spying Coalition and #NoHiDive.

Education

Pomona College
BA Mathematics, BSA Computer Science minor (GPA 3.6)

Indian Institute of Technology, Kanpur
Mathematics Department (Aug 2015)

Career

STEM Tutor at Tutor Me LA *June 2016 - present*
Present tutoring of UCLA students as a part of the UCLA Guardian Scholars scholarship.

Tutor for Incarcerated Youth at NIAI Education Consulting *March 2016 - October 2017*
Math and CS tutoring for incarcerated youth and foster youth through NIAI Education Consulting in Long Beach, CA.

Founder at GroupThere *May 2017 - present*
Launched a carpool optimization tool at groupthereroute.com. Minimizes drive-time across groups of 2-100. Configured for activist organizations, "See Issues for Cars".

Developer at FactoryOfEverything *August 2016 - March 2017*
Developed a model for purchasing, production, shipping, and holding over a factory warehouse retail system. Formulating using classical signal processing, regression, and machine learning. Implemented MVP in MATLAB. Planned out-year optimizing a SaCal assembly factory group.

Research

Optimizing Final Mitcrob Scheduling *2016*
Final Tennis in Japan
Automated and optimized yearly scheduling for 10 at Mitcrod of 120 students of Seal Temple.

Predictive Policing in Los Angeles *2017*
Stop LAPD Spying Coalition
Implemented LAPD's "hotspot" generation algorithm. Compared hotspots to historical arrest, citation, and crime report data from the City of Los Angeles. Community-generated report is entitled "Predictive Policing in Los Angeles".

Generative Models And Sparse Coding *2014*
Department of Mathematics, Pomona College
Formulated connections between the "Bulkawan Machine Distribution" and state-of-the-art unsupervised learning techniques.

Anomaly Detection Using Dictionary Learning *2013*
University of Minnesota, Minneapolis
Implemented and tested unsupervised detection of anomalous image and video data using dictionary learning and sparse coding. Part of an NSF-funded REU.

Aquatic Insect Populations' Response To Time-Varying Reproduction Rates *2012*
Oregon State University
Modeled insect populations in MATLAB using partial differential equations. Developed field data collection methodology to study model accuracy. Part of an NSF-funded REU.

Zero-Sum Flows of the Linear Lattice *2012*
Department of Mathematics, Pomona College
Proved conditions for bounds on network flows in a generalization of the boolean lattice

Honors

Outstanding Presentation Award *2014*
Joint Mathematics Meeting, Baltimore, MD
Awarded among 150 undergraduate research groups, presenting work at JMM (the most attended national mathematics conference) for summer 2013 research.

Llewellyn Bixby Mathematics Prize *2012*
Department of Mathematics, Pomona College
Awarded annually to the student with highest achievement within the Department.

Skills

Python
JavaScript, Angular JS
Java
C++
AWS, Heroku
HTML
SQL, CSRF
JSON OR, GLMOBI
Unix
MATLAB
Mathematica
LaTeX