## **ROBERT ENG**

http://roberteng.github.io/ (408) 515-7885 reng@caltech.edu

### **EDUCATION:**

## 2014-present CALIFORNIA INSTITUTE OF TECHNOLOGY, CLASS OF 2018

Pasadena, CA

Bachelor of Science in Computer Science, emphasis in Astrophysics

- CS11 Computer Language Shop C Track
- CS9 Computer Science Research
- CS21 Decidability and Tractability (planned W '15)
- CS24 Computing Systems (planned Sp '15)

#### 2010-2014 SARATOGA HIGH SCHOOL, CLASS OF 2014

Saratoga, CA

- AP Computer Science
- Very High Honors: GPA 4.0, WGPA 4.6, National Merit Finalist
- Favorite subject: History

### 2010-2011 STANFORD EPGY

- C11A Introduction to C Programming
- C11B Algorithms and Techniques
- C11C Advanced Topics in C

### Projects: Hacktech 2015

Developed the website for Caltech's hackathon attended by over 1,300 students from over 100 universities.

### **Mei Writing**

Meilan sought to attract and retain new clients to her tutoring business. The site promotes her writing services as well as enables her customers to schedule appointments through a Google Calendar.

## **INeedASocialLife**

Need help finding the times to meet up? INeedASocialLife offers an event planner and scheduler for this and changes the schedule in real time.

## Golf (card game)

To identify the optimal strategy for the card game Golf, we built a simulated tournament based on AI principles to evaluate various scenarios.

#### Science Bowl Simulator and Generator

This massive Science Bowl themed project incorporates a Simulator to practice real rounds and a Generator which puts together sets of questions based on category. These questions are scraped from multiple sources as well as generated by interpreting information off Wikipedia.

#### **Tracer**

Ever hack and lose a Stackoverflow page you viewed 14 hours ago? This chrome extension remembers coding-related pages and associates them with each project. While not glamorous, it certainly is quite useful.

# **Interactive Database for Deep Fields**

Retrieving information from massive data sets can be a cumbersome process for the scientific community. To address this problem, I built a Google Maps for galaxies. This project represented my first foray into webdev and affirmed my love of astronomy.

# **Battle of Midway**

Created for the History Day competition, this website presents a unique thesis on the importance of the Battle of Midway in history. It was also a great exercise in website design and won State Finalist for individual website.

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#### Risk

With aspirations in CS and world domination, this was built to emulate the board game Risk, complete with several maps as well as a computer opponent aptly named Stanley the Monkey.

#### Game of Life

This is a replica of the classic program Conway's Game of Life. While not the most complex, this life-changing project can be marked as the genesis of my endeavors in CS.

For my **personal website**, visit http://roberteng.github.io

## **EXPERIENCE:**

## Summer 2014 Private Tutor

Created personalized lesson plans for an extremely diverse group of students over all subjects ranging from a year-long Trig/PreCalc course to reviewing remedial arithmetic for Algebra I students.

## Summer 2013 UC Santa Cruz Astronomy Intern

Developed an intuitive and interactive Google Maps web interface for deep field galaxy surveys for use by the astronomical community worldwide. With my mentor, authored a research paper describing the conception and development of the project for submission.

# Summer 2012 Mole/Gopher Trapping Founder

Started neighborhood service to trap and remove moles and gophers. Recently branched out to rats and mice.

## Summer 2011 Secret Builders Intern

Tested functionality of an online educational community website and provided feedback, documented software problems. Moderated multiplayer role playing environment, including talk shows, parties and giveaways.

## SKILLS: Languages: Java, C, Python

Web: PHP, HTML, Javascript, JQuery, CSS, MySQL, XML, JSON

Techniques/Components/Platforms: AJAX, node.js, socket.io, Ejs, Google API,

Bootstrap, FlatUI, MongoDB

## **LEADERSHIP:**

# 2010-2014 Saratoga HS ASB Treasurer, Junior VP, Soph Treasurer, Freshman Class Rep

Represented fellow classmates at Student Body leadership meetings, participated in organizing class activities and fundraisers, rewrote the ASB Constitution.

# 2010-2014 Saratoga HS Science Club President

Plan and lead meetings and activities, quadrupled membership, created Science Olympiad team and intramural Science Bowl competition. Represented high school in Science Bowl, Programming Competitions (PROCO), Junior Technical Society (JETS) teams.

## 2012-2014 Saratoga HS Site Council Student Representative

Represented all students on council comprised of administrators, teachers, parents, and students. Created and reviewed progress of student achievement plan as well as school-wide goals.

## MISC: Can recite the periodic table in 45 seconds.

Built paper models of satellites, space telescopes, and space station