David T. Flicker

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Education

California Institute of Technology, Pasadena, CA — June 2015
Pursuing B.S. Computer Science
Overall GPA: 3.9
Relevant coursework: Machine Learning, Computer Vision, Intro. to Control Theory, Embedded Systems, Computer Systems, Differential Equations, Linear Algebra, Discrete Math, Complex Analysis

Work Experience

Hydroid, AUV market leader — June 2013 - August 2013
Software Engineer Intern
Developed build automation process
Integrated ability for vehicle to autonomously dock to underwater cable
Windows MFC, ZeroMQ, C++, and underwater acoustics

University of California, San Diego, Vinetz Group — June 2010 - September 2012
Research Associate
Independently developing a new, malaria transmission-blocking drug
Computational docking, python scripting, and fluorometric assays

Technical Projects

Caltech Robotics Team, — September 2012 - Present
Designing an autonomous submarine for AUVSI/ONR RoboSub competition
Electronics Lead / Project Manager
Spearheading the sponsorship and outreach activities of the team
Working to raise $40,000 in monetary and in-kind donations
Designed motor control and sensor interface PCBs

Caltech Rover Team, won 2nd place and $4,000 — October 2011 - May 2012
Designed a remotely tele-operated rover for the NIA/NASA RASC-AL competition
Complete project description can be found at crt.caltech.edu
Lead Electrical Engineer
Designed the power system including batteries, routing, and voltage regulation
Custom-built a servo control board and 5 V power/signal distribution board

San Diego City Robotics, placed 15th/34 in 2011 — August 2009 - August 2011
Designed an autonomous submarine for AUVSI/ONR RoboSub competition
Senior Member
Helped faculty mentor develop a passive SONAR analysis circuit
Compiled the entire vehicle's documentation

Programming Tools

Environments:	Linux and Windows
Languages/Tools (apprentice and higher):	Python, MATLAB, bash, Haskell, Scheme, LaTeX, C/C++, x86 assembly, surface-mount soldering, electronic test equipment, and Altium

Honors

Summer Undergraduate Research Fellowship — Summer 2012
High School Valedictorian
National Merit Scholarship Winner
Presidential Scholar Candidate

Activities and Hobbies

Member of NCAA Div. III Caltech Swim Team