

# Brad Saund

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650-787-4726 • brad.saund@gmail.com

## Education

June 2012

B.S., Mechanical Engineering • California Institute of Technology • Pasadena, CA  
GPA: 3.7 • Graduated with Honors

## Work Experience

Oct 2014 – Present

Software Development Engineer • Amazon • Seattle, WA

- Designed software on the Amazon Kindle E-Readers and Tablets for managing advertisements.

July 2012 – Oct 2014 Robotics Engineer • Electroimpact • Mukilteo, WA

Projects:

- Programming
  - Robot Numerical Controller to manage robot motion and sensor logic, in C++.
  - GUI to allow a person to easily control the robot, in C++.
- Data analysis
  - Developed a new model and implemented it in real time to improve robot accuracy by a factor of two.
  - Collect and analyze data to reduce positional error from a robotic arm manipulator.

2011-2012

Teaching Assistant • Caltech • Pasadena, CA

- Lectured to Mechanical Engineering students.
- Managed machine shop.

Summer 2010, 2011 Research Fellow • Caltech • Pasadena, CA

Project: Fluids Research

Funding: Summer Undergraduate Research Fellowship

Advisors: John Dabiri, Ph.D. and Beverly McKean, Ph.D.

- Designed, simulated, and fabricated parts for and tested a novel vertical axis wind turbine.
- Designed and performed fluids simulations and wind tunnel tests.

## Publications

Brad Saund, Russ DeVlieg (2013, Sep 25). High Accuracy Articulated Robots with CNC Control Systems. Paper presented at Society of Aeronautical Engineers: AeroTech, Montreal.

## Service

2013- Present

Volunteer Mentor • FIRST LEGO League • Seattle, WA

- Mentor a team of middle school students in the practice and theory of robotics using the Mindstorms EV3 LEGO set.

2011-2012

President in student government • Caltech • Pasadena, CA

- Advocated for undergraduate student welfare.
- Worked closely with Deans, Vice President, and Housing.

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## Personal Projects

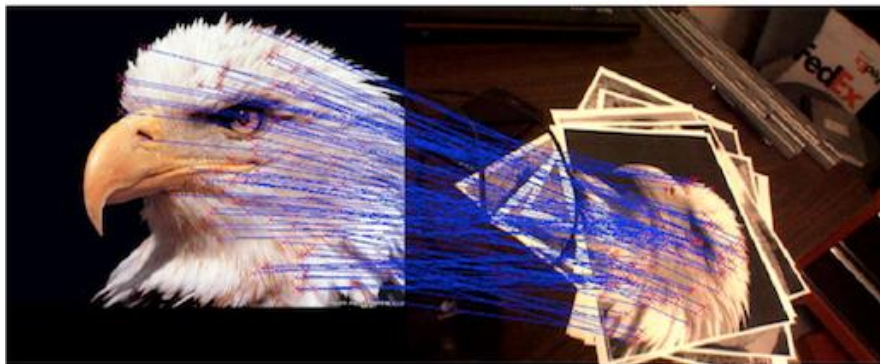
2013 -2014    Multirotor-copter • Seattle, WA

- Built a hexacopter and have flown autonomously following a programmed path using GPS and an Inertial Measurement Unit while streaming video to a ground station.



2012            Robotic Vision • Caltech • Pasadena, CA

- Used input from wheel odometry, a camera, and a laser scanner to Simultaneously Localized And Map (SLAM) a vehicle in an obstacle field, in MATLAB.
- Detected a reference image in another picture and found the image's transform. Example image below:



- Determined motion between frames of a video camera. Example image below:

