Stephen Brawner, PE

Brawner@gmail.com
StephenBrawner.com
1.541.301.7936
84 Hope St.
Providence, RI 02906

Academic

Ph.D student, Computer Science. Brown University Providence, RI exp 2017
Advisor: Odest Chadwicke Jenkins
Interests:

- Concurrent Robot Engineering Design, Human-In-The-Loop Robot Simulation, Low Cost Human Scale Manipulation

B.S. Engineering. Harvey Mudd College Claremont, CA 2007
GPA: 3.2. Deans List
Chip Memory Team Leader. Microprocessor Design

- Led on-chip memory design team through floorplan, schematics and layout to successful chip fabrication
- Designed overall unit floor plan, schematic and layout of the memory unit by coordinating individual pieces.

Clinic Project. Raytheon Company

- Designed Proof of Concept of a specular array calibration apparatus for use with satellite imagery
- Spearheaded mechanical design of specular mirror array and adjustment mechanisms

Student Led Research Project. NASA Microgravity Office

- Accepted to NASA Microgravity Office undergraduate competition through written proposal two consecutive years.
- Collaborated on mechanical design of experimental apparatus to meet stringent weight and size constraints, which successfully operated in unpredictable microgravity conditions

North Medford High School. Medford OR 2003

- Advanced Placement Scholar, Eagle Scout BSA, Apprenticeships in Science and Engineering

Professional

Consulting Engineer. Los Angeles, CA 2010-2011

- Designed and built compact device to coordinate still cameras, 3D stereoscopic sliders, grow lights and imaging lights for 3D time lapse video
- Designed and built concussion monitoring system for use in youth football

Project Engineer eSolar, Inc. Pasadena, CA 2008-2010
Heliostat Cleaning System: System, Mechanical, Controls Design and Testing
Patent Application: 20100206294, "Heliostat Field Cleaning System", First Inventor

- Designed patent-pending system to clean 12,000 mirrors nightly with only two operators
- Developed semi-autonomous heliostat cleaning vehicle as key feature of system design to restore mirror cleanliness to 95% with minimal operator intervention
- Detailed vehicle controls system, drive system, HMI, and high-pressure system to operate 8 hours/day, 5 days/week
- Built and tested components, subassemblies of prototype and first run to validate design for the final product

Heliostat: Design for Manufacturing and Assembly

- Provided detailed insight to reduce part count and simplify manufacturing processes leading to fully assembled cost reduction of 45%

System Administrator Harvey Mudd College. Claremont, CA 2007-2008

- Deployed and maintained Engineering department computer systems to provide 24/7 availability

Professional Mechanical Engineer 2011
California: License No. 35370

Primary Programming Languages
C++, MATLAB, Python