

Shounak Roy

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Education

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Expected June 2018

Bachelor of Science, Electrical Engineering Cumulative GPA - 3.53

Related Coursework –, Electricity & Magnetism Laboratories, Logic Design, Circuit Theory, Engineering Electromagnetics & Waves, Systems and Signals, Digital Signal Processing, Probability and Statistics, Wireless Networks & Physical Layer, Semiconductor Device Design(IP), Principles of Photonics(IP), Feedback Control (IP), Communication Systems(IP),

Technical Skills – Autodesk Inventor, JAVA, C++, MS Office Suite, Familiarity with Verilog, Matlab, PCB Design, Arduino, Command line

Research

Undergraduate Researcher – Ozcan Research Group, UCLA

Apr 2016 – Present

- Circuit design to optimize an LED system to illuminate samples of algae being studied by a digital holographic microscope
- Using Autodesk Inventor to conceptualize and implement different 3D structural designs that are part of the microscope setup
- Target manufacturing for a UV fluorescent speckle detection project using quantum dot technology

Projects

UCLA Unmanned Aerial Systems Team – Electronics Lead

Oct 2014 – Present

- Design, Development and Testing of a UAV capable of navigating designated waypoints, autonomous flight maneuvers, and real-time mission updates. Worked with Ardupilot, servos, electronic speed controls and other integral components.
- Represented UCLA at AUVSI'S annual Student Unmanned Aerial Systems competition.

Two Factor Access Control (2FAC)

Oct 2016 – Nov 2016

- Used the Arduino platform and wireless communication to build a dual stage security system to manage access to a secure facility
- Incorporated fingerprint detection and validation followed by a generation of a unique code that is sent to an application on the employee's phone. This unique code is then keyed into a keypad associated with the lock thus granting access

Static Magnetic Levitator

November 2015

- Building and Testing of a Magnetic Levitator Circuit with an Optical Control System.
- Attempt at levitating small objects at different distances above the ground by balancing out their weight with the magnetic force generated by an electromagnet. Balancing achieved by feedback from the optical control system.

Training

Robotics Training Camp, NASA's Kennedy Space Center, Orlando, Florida - Leader of School Team

Summer 2013

- Construction & programming of a lunar rover that was required to navigate on a Lunar Surface Replica

Catch Them Young Program, Infosys, Bangalore, India

Summer 2011

- Training involved basic introduction to RDBMS, SDLC, System Analysis and Design culminating with a group project.

Relevant Activities / Membership

- AIAA (The American Institute of Aeronautics and Astronautics), Student Wing of UCLA 2014-Present
- IEEE (The Institute of Electrical and Electronics Engineers) General Board, Student Wing of UCLA 2015-2016
- Engineering Society of UCLA 2014-Present
- Engineering Mentor as part of MentorSEAS – Official UCLA Engineering schoolwide mentorship program 2015-Present

Awards/ Honors

Dean's Honors List

Spring 2016

- For securing a GPA above 3.7/4.0 (3.86) in a quarter with at least 15 units of study (20)