

Ryan Williams
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Education

- **UC Berkeley— 3.4 GPA** **Aug. 2016 - Present**
Electrical Engineering & Computer Science
 - Selected coursework: Embedded Systems Design, Signals & Systems, Data Structures, Discrete Math & Probability Theory, Machine Structures.
- **Santa Barbara City College— 4.0 GPA** **Aug. 2013 - May 2016**
Engineering Transfer
 - Received SBCC Foundation President's Scholarship. Member, Computer Engineering Club.

Experience

- **Summer Associate** **May 2017 - Present**
NASA Ames Research Center, Mtn View CA
 - Electronics engineer and researcher working on free space optical communication protocol.
 - Co-author of NASA invention disclosure and forthcoming technical paper. Designed graphics, and technology demonstration for grant proposals and annual reports.
 - Develops MATLAB and Python scripts for serial communication (RS-232), waveform generation, and signal processing
 - Manages set-up, execution, and data processing for optics experiments. Trained in laser safety and conducting experiments that include amplitude and wave-front analysis on red and IR reflections.
 - Qualified and adapted existing drive electronics for use with MEMS adaptive optics device.
- **Mathematics Tutor** **Aug. 2014 - July 2016**
SBCC, Santa Barbara CA
 - Drop-in tutor for Advanced Math Lab (all levels), saw 5-50 students per day.
 - Gateway tutor for Algebra, Calculus, and Linear Algebra. Hosted 1-2 hour private and group sessions. Gave lessons, review sessions, and supplemental problem sets.
 - Functioned as TA through in-class tutoring, contribution to lectures, and exam consultations.
 - Mentored new tutors through consultation and workshops and developed problem solving worksheets and heuristics for students.
- **PCB Layout Engineer** **Feb. 2014 - June 2015**
Green Light Props, Santa Barbara CA
 - Company to develop smart LED dance props.
 - Designed PCB with an ARM-based chip using an 802.15.4 radio, 3-axis accelerometer, LED driver, and USB charging system.
 - Developed schematics and layouts for two-layer high speed PCBs, Implemented layouts in coordination with manufacturers and suppliers, Ensured layout design compliance with manufacturing requirements.
 - Maintained documentation of PCB layout and fabrication and performed system checks and tests.
- **Co-Owner** **Jan. 2012 - Present**
Lucidity Festivals LLC, Santa Barbara CA
 - Partner in worker-owned event production company.
 - Pioneered group decision-making processes, maintained operating agreement, authored orientation materials and procedure handbook.
 - Holds ongoing roles for annual 5000 person festival. Liaison with County Fire Dept., author of relevant permits.
 - Responsibilities include material and personnel deployment, inventory management, and budgeting.

Technical Skills

Languages: (Java, C/C++, Python, SQL, MIPS) **Tools:** (git, Unix, CAD, MATLAB, LabVIEW)