# Daniel Gu

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## Education

University of Michigan – Ann Arbor, B.S.E in Aerospace Eng, Minor in Electrical Eng | 3.25/4.00 *Expected Apr 2020*

- Intro to Aerospace Engineering, Intro to Computers and Programming, Multivariable Calculus
- Intro to Electronic Circuits, Differential Equations, Dynamics & Vibrations (Fall 2017)
- Space Flight Mechanics, Intro to Aerospace Engineering Systems, Intro to Signals & Systems (Winter 2018)

Bergen County Academies – Hackensack, NJ; Academy for Engineering Design and Technology *2012 – 2016*

## Work and Project Experience

Michigan eXploration Laboratory (MXL) – Research Assistant *Jan 2017 –*

- Helped develop and assemble the Tandem Beacon Experiment (TBEx), a pair of 3U CubeSATs
- Wrote electronic checkouts for flight and debugged existing engineering development processes
- Populated flight-level PCBs and performed electronic checkouts (ref: Prof. J. Cutler, jwcutler@umich.edu)
- Coordinated launch logistics for ballooning subteam as part of NASA's 2017 Eclipse Ballooning Project
- Managing spacecraft bus for Measuring Actuator Response and Impedance in Orbit (MARIO), joint research project testing application of microfiber composites (MFC)

Introduction to Aerospace Engineering (Remote Controlled Blimp) – Student *Jan 2017 – May 2017*

- Designed, built, test, and competed an Arduino-based RC blimp with a 3-person team
- Focused on structural, controls, and wiring design and manufacture (ref: Prof. P Washabaugh, pete@umich.edu)
- Designed and delivered oral and written reports on project throughout duration of project

Recon Industrial Controls Corporation – Engineering Intern *Sept 2015 – June 2016*

- Tested methods for a wireless serial link to the LabRecon board
- Ported LabRecon software to Linux using the WINE environment

City College of New York, Grove School of Engineering – Teacher's Assistant *June 2015 – Aug 2015*

- Aided plan, develop, and teach intensive 6-week robotics class
- Covered basic Python, Unix command line, circuit theory, gen electronics to make a sumo robot

Locating and Identifying Viable Asteroids (NASA ICED) – Student *Nov 2013 – Nov 2014*

- Prototyped a device with Arduino, custom-made PCB to measure the magnetic permeability of an asteroid and estimate amount of water gained from harvest
- Worked in collaboration with Kokutai-ji High School, sponsored by the Japanese Ministry of Education
- Presented at the Super Science HS Convention, at the Hiroshima International Conference Hall

## Leadership Experience

hackBCA: Chief of Staff *2014 – 2016*

- Board member for the third iteration of hackBCA, one of the largest high school hackathons in the nation
- Coordinated staffing and day-of logistics

Junior State of America (JSA): Director of Fundraising *2012 – 2015*

- Reduced overnight convention costs by over $100 per attendee, ended 2014 with over $3000
- 2014 Junior State of America National Civic Impact Award

## Extracurriculars

American Institute of Aeronautics and Astronautics (AIAA) *Sept 2016 –*
Institute of Electrical and Electronics Engineers (IEEE) *Sept 2017 –*
Michigan Men's Glee Club; Bass I *Sept 2016 –*

## Skills

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| Communication: | Technical Writing; Fluent in Mandarin |
| Software – Experienced: | Altium Designer, MATLAB, LaTeX, Autodesk Inventor/AutoCAD; Unix command line |
| Software – Basic: | Mathematica, C/C++ |