

ALEXIS MITCHNICK

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EDUCATION

University of Pennsylvania
Philadelphia, PA

Bachelor of Science in Engineering

Exp. May 2019

- *Cumulative GPA*: 3.8/4.0
- *Major*: Mechanical Engineering and Applied Mechanics
- *Minors*: Computer Science, Mathematics
- *Honors*: Dean's List 2015 - Present

Half Hollow Hills High School West
Dix Hills, NY

- *Cumulative GPA*: 98.5/100
- *SAT*: 2290, 750 Math/740 Verbal
- *Honors*: National AP Scholar, National Art Honor Society, Oberlin College Book Award, Board of Education Award

June 2015

TECHNICAL SKILLS

- **Programming Skills**: Java, OCaml, Matlab, Arduino, HTML/CSS, git
- **3D Modeling and Fabrication**: Solidworks, laser cutting, 3D printing

WORK EXPERIENCE

University of Pennsylvania, Mechanical Engineering Department | Grader
Philadelphia, PA

Aug. 2017- Present

- Evaluate and grade weekly homework of all students in Introduction to Mechanical Engineering course

ANZE Suspension | Mechanical Engineering Intern
Greenville, NY

Summer 2017

- Completed multiple engineering projects that boosted efficiency in the servicing of racing shocks by ~15 mins/day
- Performed a motion study of shock technician, analyzing complete damper service procedure to devise solutions to streamline daily service tasks and minimize quality errors
- Utilized configuration modeling in Solidworks to design tools for shock servicing, examining FEA data to determine part strength and durability
- Generated 2D drawings in Solidworks for prototype manufacturing, including dimension tolerances for press fits
- Redesigned company website media galleries to improve user experience
- Instituted cloud-based Microsoft Planner to manage engineering projects

Camp Wah-Nee | Assistant Division Director
Torrington, CT

Summer 2015, 2016

- Managed a division of 25+ 8-11 year-old girls in group activities, taught conflict resolution skills

COLLEGE DESIGN PROJECTS

Penn Aerospace Balloon Team | High-Altitude Balloon Engineer, Altitude Control Specialist

Aug. 2016 - Present

- Collaborate with team members to design, construct and implement an electro-mechanical system that allows for flight control based on thermodynamic conditions
- Generate balloon trajectory simulations in Matlab and Simulink to obtain data necessary to create a successful and robust altitude control system
- Prepare presentations for design reviews and participate in bi-semester balloon launches

Product Design and Development

Spring 2017

- Designed, modeled, built, and marketed a motorized water bottle brush

Programming Languages and Techniques I

May 2016

- Designed computer game in Java, incorporating complex modeling of data collections, I/O files, and physics-based animations

Introduction to Mechanical Design

Nov. 2015

- Deconstructed electro-mechanical children's toy with 40+ parts; created a functional assembly in Solidworks and an exploded-view video of the dissected model

ACTIVITIES AND LEADERSHIP

Delta Delta Delta Sorority | Member

Jan. 2016 - Present

Jewish Heritage Program | Event Coordinator

Aug. 2015 - Present

High School West Physics Club | Founder

Sept. 2014 - June 2015

High School West Student Government | Vice President

June 2012 - June 2015

High School West Danceline Team | Captain

June 2011 - June 2015

INTERESTS

- Aerospace, Astronomy, Fine Art, Photography, Art History, Fashion, Dance, Kickboxing