# ALEXIS MITCHNICK

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## EDUCATION

**University of Pennsylvania** — Bachelor of Science in Engineering — **Exp. May 2019**
*Philadelphia, PA*

- *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** — **June 2015**
*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

## TECHNICAL SKILLS

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

## WORK EXPERIENCE

**ANZE Suspension | Mechanical Engineering Intern** — **Summer 2017**
*Greenvale, NY*

- 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 necessary press fits
- Redesigned company website media galleries to improve user experience
- Instituted cloud-based Microsoft Planner to manage engineering projects

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

**Introduction to Mechanical Design**

- Deconstructed electro-mechanical children's toy with 40+ parts; created a functional assembly in Solidworks and an exploded-view video of the dissected model — **Nov. 2015**

## 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