

## EDUCATION

- University of California - Los Angeles** Los Angeles, CA  
*Bachelor of Science - Mechanical Engineering - GPA: 3.54* *Expected Jun. 2022*  
**Courses:** Intermediate Fluid Mechanics, Advanced Strength of Materials, Principles of Nanoelectronics, Environmental Nanotechnology

## WORK EXPERIENCE

- NanoClear Technology** Pasadena, CA  
*Process Engineer Associate* *May - Sep. 2019, Jun. - Dec. 2020*
  - Successful installation and validation of semiconductor process equipment including an e-beam evaporator and ICP etcher. Enlisted several contractors and developed standard operating procedures, recipes, and custom fixturing for unique substrates. Supporting documentation including standard operating procedures.
  - Substrate Dipping and Drying Robot:** Developed a quick, low-cost, user programmable, and repeatable substrate dipping and drying robot on 3D printer platform. Led design review involving multiple disciplines. Supporting documentation.
  - Custom tooling and supporting software for environmental materials testing of nano-enabled super-hydrophobic and super-hydrophilic surfaces. Custom chemical process hardware. Ported existing processes to new tooling and applications. Enlisting prototyping manufacturers.
  - Environmental Chamber:** Environmental chamber for materials testing. Involved Raspberry Pi, Arduino, PID control, and python application. Holds  $\pm 0.5^{\circ}\text{C}$  and  $-5\%\text{RH}$  with cycling behavior. Conducted design validation and presented supporting process data.
- California NanoSystems Institute - Integrated Systems Nanofabrication Cleanroom** Los Angeles, CA  
*Lab Assistant* *Feb. - Jun. 2019*
  - Ordering chemicals, ensuring tools operate within specifications, chemical waste handling, cleanroom specific tasks (particle count, laundry, etc.).
- Wellstar Kennestone Hospital** Marietta, GA  
*Technician - Advanced Endoscopy Center and Linen Technician* *Jun. - Sep. 2018*
  - Vital signs, patient transportation between rooms, room turnover, inventory, customer service, infection protocol and personal protective equipment
  - Distributing Linen
- Canister Design** Woodstock, GA  
*Software Development Intern* *Jun. - Jul. 2017*
  - Introductory Swift IOS Development for MacOS and iOS applications, API interaction

## PROJECTS

- University Cooperative Housing Association** Los Angeles, CA  
*Secretary of the Board of Directors* *Nov. 2020 - Pres.*
  - Non-profit policy governance and COVID financial crisis management, providing affordable housing to over 400 student Angelenos. Team of seven elected directors and multiple committees.
- Bruin Racing - Super Mileage** Los Angeles, CA  
*Powertrain Lead and Lab Manager* *Sep. 2018 - Pres.*
  - Project management of a six person team involving multiple disciplines, including mechanical and electrical design for torque sensing engine mount and belt driven starting mechanism supporting a high-efficiency vehicle.
  - Standard operating procedures and shop layout and organization.
  - Torque Sensing Engine Mount:** Sheet metal design for engine, wheel, and starter motor mounts.
  - Fuel Pressurization:** Pressure vessel and safe regulation for static fuel pressurization and 3D printed mounting hardware. Conducted design safety validation including burst testing.
- IdeaHacks2020 Hardware Hackathon, Education Category Winner:** Automatic book reader using vision processing API on Raspberry Pi in under 48 hours. Five person team.
- IdeaHacks2019 Hardware Hackathon, 1st Place Winner:** RFID bike lock in under 48 hours using CAD, 3-D printers, and Arduino. Five person team.
- UCLA Department of Mechanical and Aerospace Engineering** Los Angeles, CA  
*Student* *Sep. 2018 - Pres.*
  - 2D Acoustic Mapper:** Planer acoustic mapping using omnidirectional microphones and speaker.
  - Engineering 96: Rockets:** Carbon fiber and 3D printed model rockets(1-3 ft. in length). Suspended egg payload carrier.
- For Fun:** ESP32-based bluetooth keyboard(in progress). Raspberry Pi home VPN, network DNS ad blocking, and 3D printing server.

## SKILLS SUMMARY

- Languages** Python, MATLAB, Julia, L<sup>A</sup>T<sub>E</sub>X, Arduino
- Tools** SolidWorks, GIT, Minimal Simulink and KiCAD
- OS** Linux(Manjaro, Ubuntu), Windows, MacOS