

Jeffrey Anderson

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EDUCATION

- **University of California - Los Angeles** Los Angeles, CA
Bachelor of Science - Mechanical Engineering - GPA: 3.54 Expected June 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^AT_EX, Arduino
- **Tools** SolidWorks, GIT, Minimal Simulink and KiCAD
- **OS** Linux(Manjaro, Ubuntu), Windows, MacOS