Jeffrey "Jeff" Anderson

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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

TECHNICAL WORK EXPERIENCE

NanoClear Technologies — Pasadena, CA
Process Engineer Associate — *May - Sep. 2019, Jun. - Dec. 2020*

- Install and validate semiconductor process equipment including e-beam evaporator and plasma etcher. Direct electrical and process piping contractors in supporting equipment and create standard operating procedures, recipes, and custom fixturing for unique substrates.
- Create custom tooling and support software for environmental materials testing of nano-enabled super-hydrophobic and super-hydophillic surfaces. Port existing processes to new tooling and applications. Engage rapid-prototyping manufacturers.
- Substrate Dipping and Drying Robot: Engineer low-cost, user programmable substrate dipping and drying robot on 3D printer platform for production with documentation. Design subject to multi-dicipline review.
- Environmental Chamber: Design environmental chamber for materials testing. Hold $\pm0.5°$C and lower bound %RH with cycling behavior. Conduct design validation with supporting experimental data. Design requires Raspberry Pi, Arduino, PID control, and python GUI.

Bruin Racing - Super Mileage — Los Angeles, CA
Powertrain Lead and Lab Manager — *Sep. 2018 - Pres.*

- Project manage six-person multi-disciplinary team for high-efficiency vehicle powertrain. Establish iterative weight, manufacturing time, and cost reduction metrics subject to design specifications.
- Create standard operating procedures and shop layout.
- Torque Sensing Engine Mount: Coordinate mechanical and electrical team members to sense engine torque output using load cells for real-time engine control unit feedback.
- Fuel Pressurization: Design pressure vessel and safe regulation for static fuel pressurization. Conduct design safety validation including burst testing.

GENERAL WORK EXPERIENCE

University Cooperative Housing Association — Los Angeles, CA
Secretary of the Board of Directors — *Nov. 2020 - Pres.*

- Direct policy governance in non-profit's mission to provide affordable housing to over 400 UCLA students and mitigate Covid-19 financial losses. Establish advertising campaign efficacy metrics to increase membership. Seven elected directors and multiple committees.

California NanoSystems Institute - Integrated Systems Nanofabrication Cleanroom — Los Angeles, CA
Lab Assistant — *Feb. - Jun. 2019*

- Ensure tools operate within specifications, procure chemicals dispose of waste, maintain cleanroom(particle count, laundry, eg.).

Wellstar Kennestone Hospital — Marietta, GA
Technician - Advanced Endoscopy Center and Linen Technician — *Jun. - Sep. 2018*

- Take Vital signs, transport patients between rooms, turnover rooms, conduct inventory, observe infection protocols, distribute linen.

PROJECTS

- **Physicss 4BL: 2D Acoustic Mapper**: Planar 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.
- **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 using CAD, 3-D printers in under 48 hours. Five-person team.
- **For Fun**: ESP32-based Bluetooth keyboard(in progress). Raspberry Pi home VPN, network DNS ad blocking, and 3D printing server, amateur radio.

SKILLS

- **Languages**   Python, MATLAB, Julia, LaTeX, Arduino
- **Tools**   SolidWorks, Git, Minimal Simulink and KiCAD