Landon P. Doughty

Houston, Texas | 713-383-7341 | landondoughty@gmail.com | landondoughty.com

EDUCATION

Rice University - B.S. Electrical Engineering, **GPA: 4.0** **Expected May 2028**
Trustee Distinguished Scholar

SKILLS

Design and Manufacturing: SolidWorks, Onshape, FDM 3d Printing and Slicing, Laser Cutting

Electrical Design: KiCad, LTspice, STM32, ESP32, Arduino, Raspberry Pi

Physical Electronics: SMT/ THT Soldering and Prototyping

Software & Programming: Python, C++, Java, HTML/CSS, VSCode, MATLAB, LaTeX

EXPERIENCE

Rice ECLIPSE Avionics Engineer **August 2025 - Present**

- Design and manufacture custom flight controllers and circuit boards for high-power rocketry
- Develop electronic systems for active flight stability using controlled fins.
- Devising a flight controller intended for use in a space-shot rocket

Texas Children's Hospital Simulation Center - Intern (Houston, TX) **May 2024 – August 2024**

- Operated a medical-grade 3D printer and designed 3d medical models used for teaching and medical simulations.
- Oversaw daily medical simulations for various complex scenarios.
- Controlled complex medical mannequins for surgical simulations, including various biorealistic functions.

TXRX Labs - Intern (Houston, TX) **May 2023 – August 2023**

- Designed and manufactured math learning puzzles and games for a local non-profit.
- Developed maker-space lessons for Exxon-Mobil
- Led STEM community outreach for underprivileged children in the Houston area.

PROJECTS - landondoughty.com

Robotic Chess Board (Small Team) **September 2022 – May 2023**

- Engineered a robotic chess board capable of detecting a player's move, thinking of the next move at a level specified by the user, and playing that move using an electromagnet under the board
- Developed a 4-string tension movement system for an electromagnet underneath the board
- Designed a custom circuit board with 64 Hall effect sensors and analog multiplexers for piece movement detection
- Won second place in the Robotics and Intelligent Machines category at ISEF 2023

VTOL Medical Delivery Drone (Small Team) **May 2023 – May 2024**

- Developed a custom autonomous VTOL hybrid drone capable of delivering AEDs in a range of up to 10 miles at 60mph.
- Designed a custom printed circuit board for flight control
- Won second place in the Robotics and Intelligent Machines category at ISEF 2024

Lidar Scanning Drone Swarm (Small Team) **May 2024 – May 2025**

- Engineered a custom drone swarm capable of creating 3d point clouds of large structures and buildings using lidar
- Designed a custom flight controller circuit board based on the STM32F1 chip for maintaining steady flight
- Developed all drone electronics, including the lidar-gimbal system for 3d scanning and the ESC-motor system.

AWARDS

International Science and Engineering Fair, Robotics and Intelligent Machines – 2nd Place 2023 & 2024

International Science and Engineering Fair, Central Intelligence Agency Award – 1st Place 2023