William Laney

(703) 944-7337 • williamlaney@yahoo.com • www.williamlaney.com

Work Experience

Meta, Reality Labs **Pittsburgh, PA**
Electrical Engineer *Feb 2022-Present*

- Preformed electrical design of data collection systems and prototype devices, used to create photo-realistic human avatars for virtual reality (VR)
- Architected a high precision timing system capable of synchronizing thousands of lights and cameras
- Led development of a novel robotic photogrammetry device for creating photo-realistic virtual spaces
- Created a power and control system for a thousand spot lights, with a total system power greater than 30kW
- Designed high speed, high power, and flexible PCBs in Altium and Cadence
- Manage multiple external partners performing PCB design, FPGA development, and manufacturing
- Developed C++ and Python applications to support experimental hardware
- Oversaw design work and provided technical mentorship for junior engineers
- Responsible for debugging electrical issues at the system and PCB levels
- Used rapid prototyping tools (quick-turn PCB manufacturing, 3D printing, ect.) to iterate on risky designs
- Worked with signal integrity and failure analysis teams to quickly diagnose and address hardware failures

Carnegie Robotics **Pittsburgh, PA**
Electrical Engineer *Jun 2020-Jan 2022*

- Performed system level electrical design for robotic products
- Designed high speed and power system PCBs in Altium
- Developed applications in C to run in an embedded Linux environment
- Worked with digital communication protocols including Ethernet, MIPI-CSI, I^2C, SPI, CAN, and RS-232
- Experienced with full product life cycles, from advanced R&D to manufacturing and full rate production
- Involvement in designs across multiple industries including recreational boating, pipe inspection, and defense

Test Engineer *Apr 2018-Aug 2019*

- Developed and deployed PCB and system level test fixtures
- Wrote testing frameworks and applications in Python
- Designed PCBs to support testing
- Communicated with customers and product designers to determine testing criteria
- Interfaced between Engineering, Production, and Quality departments to resolve manufacturing issues
- Created ISO compliant work instructions and documentation

Education

Cornell University **Ithaca, NY**
M.Eng. Electrical and Computer Engineering *Aug 2019-Jun 2020*

- Designed novel pattern projector systems for stereo image matching in partnership with Carnegie Robotics

College of William & Mary **Williamsburg, VA**
B.S. Cum Laude, Physics with Honors; Mathematics minor *Aug 2014-Jan 2018*

- Developed a low power accelerometer and gyroscope-based sensor system to study Sandbar Shark behavior
- President, William & Mary Robotics Club

Technical Skills

Software: Altium, Cadence, Python, C, C++, MATLAB, BASH, Linux, version control, LaTeX
Hardware: Oscilloscope, Logic Analyzer, Function Generator, Digital Multimeter, Soldering, 3D printing

Activities and Organizations

Explores Club of Pittsburgh secretary, Hiking, Backpacking, Rock Climbing, AEΠ fraternity, Eagle Scout