RANDAL RICHARDS

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Summary: Mechanical Engineering graduate (December 2026) seeking field engineer, project engineer, or engineering roles in power, energy, and construction. Field inspection experience on a utility grid-hardening program, a Lockheed Martin capstone win, and a hands-on builder who teaches himself new skills fast.

Programs: AutoCAD, Revit, Navisworks, Autodesk Inventor, Fusion 360, MATLAB, Python, ANSYS (Fluent CFD, FEA), Claude Code, Java
Fabrication: 3D printing (Creality K2, PETG/PLA), soldering, wiring and power regulation, Arduino/ESP32 (C++), servo calibration, hand tools
Communication: Technical presentations, stakeholder & government/media briefings, cross-disciplinary instruction, team leadership

EDUCATION

B.S. Mechanical Engineering *August 2023 – December 2026*
University of Georgia *Athens, GA*

- **Relevant Coursework:** Thermodynamics, Fluid Dynamics, HVAC, Mechanical Structures & Materials, Dynamics, Statics, Engineering Design, CAD, Revit, Engineering Ethics

PROFESSIONAL EXPERIENCE

Engineering Inspector Intern *May 2025 – August 2025*
HKT Energy Group *Charlotte Amalie, St. Thomas, U.S. Virgin Islands*

- Inspected underground electrical duct bank installations for the WAPA grid-hardening and undergrounding program across 6 sites on 3 islands, reviewing 4 plan sets in Autodesk Inventor to catch drawing-to-field discrepancies before installation.
- Coordinated and collaborated with senior engineers to troubleshoot electrical and mechanical installation issues in the field, keeping multiple concurrent project scopes on schedule.
- Maintained jobsite safety for 20+ personnel and briefed government agencies and media on project status on behalf of the organization.

Co-Founder & Operations — Trikes & Tings VI *2026 – Present*
Family-Owned Trike Tour Business *St. John, U.S. Virgin Islands*

- Co-founded a guided trike tour company with my mother and launched it in St. John, setting up the Vitacci X300 trike fleet, online booking with digital liability waivers, rider safety rules (DOT helmets, 18+ riders), and AI-assisted marketing.

Youth STEM Enrichment Educator & Program Facilitator *May 2026 – July 2026*
P2PINC Summer Camp *Loganville, GA*

- Led TinkerCAD design builds of airfoils, wings, and ship hulls for students ages 7–12, teaching force, lift, and drag through predict-test-iterate cycles with differentiated, inclusive lessons.

ENGINEERING PROJECTS

Aircraft Wing Optimization — Team Lead *August 2025 – May 2026*
Lockheed Martin Sponsored Capstone *Athens, GA*

- Achieved a 3% increase in nautical-mile range by building a MATLAB and Python optimization workflow grounded in Breguet range equations and Raymer design principles, CFD-validated at an L/D of 21.9.
- Won the Viewer's Choice award among 130 teams at UGA Capstone, earning Dean of Engineering recognition, while leading a 6-person team for a full year and briefing Lockheed Martin Skunk Works officials in Marietta and Dallas.

Autonomous Quadruped Robot — Personal Build *September 2026*
Self-Directed, Self-Taught Project *Athens, GA*

- Taught myself soldering and embedded electronics to build a 12-servo Arduino Nano walking robot in 5 days: 3D-printed the frame, soldered a 2x 18650 battery pack through an LM2596 buck converter to a 5V servo rail, calibrated every joint, and uploaded gait firmware with ultrasonic obstacle sensing.

ORGANIZATIONS, HONORS & REFERENCES

Organizations: NSBE (National Conference 2026, Baltimore) | BLMS | BBUGA | UGA Research & Development Team | UGA Formula SAE Electric Team
Honors: Viewer's Choice Award, UGA Capstone (130 teams) | Dean of the College of Engineering Recognition | Most Likely to be a CEO, CEO Conference Expo for Leading Black Engineers of the U.S. | 1st Place, Sophomore Engineering Design Competition | EELD Leadership Certificate, University of Georgia | President's & Dean's List, University of Georgia
Reference: Clinton Hedrington, Managing Director, HKT Energy Group | clinton@hktenergy.com | (340) 642-0705