

DONTAVIOUS ELLIS

Tampa, FL • 772-205-1606 • edon4585@gmail.com | U.S. Citizen

LinkedIn: linkedin.com/in/dontavious-ellis | **Portfolio:** dontaviousellis.com | **GitHub:** github.com/thefourierphantom

EDUCATION

University of South Florida (USF) – B.S. Electrical Engineering | Tampa, FL | **Expected Graduation:** May 2028

TECHNICAL SKILLS

- **Power & Circuitry:** AC/DC Circuit Analysis, 3-Phase Power, Power Factor Correction, Load Flow Analysis.
- **Design & Simulation:** MATLAB/Simulink, LTSpice, SOLIDWORKS Electrical, AutoCAD (2D/3D), Revit, PSpice, KiCad
- **Hardware & Lab:** Digital Oscilloscopes, Multimeters, Function Generators, Soldering, PWM Control, ESP32/Arduino, Signal Conditioning.
- **Software:** C/C++, Python, Bash Automation, Git/GitHub, Linux.

PROFESSIONAL EXPERIENCE

GNSI Future Strategist Program — D.C. Experience | Cohort Delegate **May 2026**

- Selected for a competitive national security cohort; engaged 15+ senior officials across the Pentagon, Capitol Hill, and CNAS.
- Directed discussions on **GPS-denied navigation, resilient communications, and electronic warfare** threats for non-technical audiences.
- Identified research pathways for **ARMS** aligned with areas discussed by **USSOCOM, USCENTCOM, and major defense contractors.**

Electrical Engineering Intern | **Orbital Corporation** | **Tampa, FL** **May 2026 – Present**

- Fabricate **tactical communications wiring harnesses** and aerospace cable assemblies in compliance with **IPC-A-610 Class 3** standards.
- **Crimp** multi-pin circular connectors and perform high-reliability cup **soldering** for board-level electronic assemblies.
- Isolate wiring, routing, and insulation faults via point-to-point **continuity** and **resistance testing** with **digital multimeters.**
- Map EMI shielding, backshell strain reliefs, and lacing by interpreting physical nailboard layouts, assembly drawings, and wire run lists.

Research Assistant | **USF CIBR Lab** | **Tampa, FL** **Mar 2026 – Present**

- Design and execute a structured classification framework across 100+ hardware and software cases to support AI model training data.
- Contribute to the development of SeniorSafe AI, a specialized conversational model for senior citizen cybercrime victims.

Website Specialist – **USF Dept. of Mechanical Engineering** | **Tampa, FL** **Sep 2024 – Present**

- Serve as primary technical contact for department website updates across 15+ pages, office system configuration, and local IT maintenance.

TECHNICAL PROJECTS

Applied Research in Military Systems (ARMS) at USF | **Lead Researcher & Founder** **May 2026 – Present**

- Developing a GPS-denied navigation prototype using **C++/MATLAB Kalman filtering** to fuse simulated 6-DOF IMU and atmospheric data.
- **Error Characterization:** Conducting **Inertial Dead Reckoning** studies to establish sensor bias baselines and reduce cumulative drift.
- **TT&C Implementation:** Building a **Telemetry, Tracking, and Command** ground station for real-time state estimation and fault monitoring.

Smart Load-Shedding & Power Distribution Controller **Dec 2025 - Jan 2026**

- **Hardware Design:** Engineered an ESP32-based power distribution unit to monitor real-time loads with a $\pm 0.5\%$ current sensing accuracy.
- **Control Logic:** Developed PWM-based trip-logic to prevent overcurrent, maintaining system stability within 10% of peak rated capacity.
- **Bench Testing:** Utilized digital oscilloscopes to validate signal integrity, reducing noise (Vpp) by 35% through active RC signal conditioning.

Resilient Infrastructure Simulation Lab | **Proxmox VE, MATLAB, Python, Linux** **Jan 2026 – Present**

- Conducted load-flow simulations in MATLAB to identify service recovery strategies, optimizing simulated grid restoration time by 22%.
- Built an AI-driven simulation model to analyze failure propagation across 7 infrastructure layers, generating 500+ unique grid outage scenarios.

LEADERSHIP & INVOLVEMENT

Technical Development Chair – **National Society of Black Engineers (NSBE)** – **USF Chapter** **Apr 2025 – Present**

- Direct technical skill-building initiatives and workshops for a chapter of 100+ engineering and technology students.
- Develop curriculum on Arduino fundamentals for community outreach programs targeting K-12 students.

President – **USF Society for Critical Operations and Preparedness Engineering (SCOPE)** **June 2025 – Dec 2025**

- Founded & scaled a 60+ member organization focused on mission-critical readiness and emergency engineering operations.

CERTIFICATIONS

CompTIA Security+ (Jan 2026)