JUSTIN LUKOSE

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EDUCATION

Kennesaw State University – Marietta, GA
Bachelor of Science in Computer Engineering
3.67 GPA
Expected: Summer 2026

Relevant Course Work: Digital Logic Design   VHDL Design with FPGAs   Advanced Embedded Design
Engineering Electronics   Device Networks   Digital Signal Processing

PROJECTS

Project: Home Lab and Network Architecture
Computer Engineer / Systems Admin / Network Engineer   *Jan. 2024 – Current*

- Built a home server from repurposed hardware, investing 300+ hours to build a fully virtualized and containerized environment for scalable service hosting.
- Designed and deployed a secure home network with multiple subnets to improve performance, segmentation, and security across devices.
- Hand-routed and terminated CAT6 Ethernet cabling to optimize wired connectivity and ensure reliable throughput.

Project: eBike Conversion
Electrical & Mechanical Engineer   *Aug. 2025 – Current*

- Converting a pedal bicycle into an electric bike by integrating a custom-designed axial-flux electric motor and lithium-ion battery pack.
- Designed and engineered a lithium-based battery system tailored for performance, efficiency, and safe power delivery.
- Studying bicycle mechanics and drivetrain design to ensure seamless integration of electrical and mechanical systems.

SKILLS

Skills: VBA, Javascript, Python, C++, VHDL, Assembly, React Native, CAD, LTSpice, MatLab, Proxmox, Linux

EXPERIENCE

Research Assistant, *KSU Department of Computer Engineering*   *Jan. 2025 – Current*
"Erza AI: Agentic AI System for Multimodal Human-Robot Collaboration"

- Investigating methods to enable humanoid robots to interpret spoken commands and align them with visual input.
- Combining speech recognition, symbolic reasoning, and computer vision to achieve semantic alignment between natural language and perceived objects.

Research Assistant, *KSU Office of Undergraduate Research*   *Sept. 2022 – May 2023*
"CRII: FET: Neuromorphic Processing Framework for Spatiotemporal Fusion of Visual Sensors"

- Contributed to manufacturing and assembly of UAV and edge robots.
- Used CAD software to design enclosures for Raspberry Pi and other single-board computers, then 3D printed and mounted them to a robotic vehicle.
- Presented research at the Symposium of Student Scholars event, and the KSU MOVE Regional Symposium.

Pet Care Assistant, *Banfield Pet Hospital*   *Aug. 2023 – Sept. 2024*

- Participated in team meetings and training sessions to ensure best practices of pet care facility and procedures.
- Administered medications and treatments to animals under guidance of veterinarians in a fast paced environment.