JUSTIN LUKOSE

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EDUCATION

Kennesaw State University **Kennesaw, GA**
Bachelor of Science, Computer Engineering 3.67 GPA *Graduation: May 2026*

WORK EXPERIENCE

Banfield Pet Hospital **Acworth, GA**
Pet Care Assistant *Aug. 2023 – September 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.

SKILLS, INTERESTS, & PROJECTS

Project: Home Lab and Network Architecture
Computer Engineer / Systems Admin / Network Engineer *January 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 *August 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.

Research: *"CRII: FET: Neuromorphic Processing Framework for Spatiotemporal Fusion of Visual Sensors"*
Undergraduate Researcher / Volunteer *September 2022 – May 2023*

- Contributed to manufacturing and assembly of UAV and edge robots.
- Designed and constructed CAD based models.
- Presented research at the Symposium of Student Scholars event, and the KSU MOVE Regional Symposium.

Research: *"Erza AI: Agentic AI System for Multimodal Human-Robot Collaboration"*
Undergraduate Researcher / Volunteer *January 2025 – Current*

- Investigating neural-symbolic AI 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.

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

RELEVANT COURSEWORK

- CSE 1321 - Programming Problem Solving I
- EE 2501 - Digital Logic Design
- CPE 3000 - Computer Organization & Interfacing
- CPE 3020 - VHDL Design with FPGAs
- CPE 3030 - Advanced Embedded Design
- EE 3401 - Engineering Electronics
- CPE 4020 - Device Networks
- CPE 3500 - Embedded Digital Signal Processing