Katrina Adewale

ka211401@ucf.edu | linkedin.com/in/katrina-adewale | github.com/kateye31 | katrinaadewale.dev

Education

University of Central Florida Orlando, FL

Bachelor of Science in Computer Science; Minor in Intelligent Robotic Systems ***Dec. 2027 (Expected)***

Organizations: STEM Ambassadors, EAN Ambassadors, T-LEARN Scholar, Knight Research Scholar, Hack@UCF, Girls Who Code, BSides Florida, WEECS, Knight Hacks, Florida Bright Future's Scholar

Experience

IIoT Solutions Engineer Intern **Oct. 2026 - Present**

Lockheed Martin *Orlando, FL*

- Developing scalable **IIoT Dashboard Analytics UX** in an **AWS Cloud** infrastructure, architecting end-to-end data pipelines that will connect technical decisions to real-time operational outcomes all across production manufacturing.

Engineering Ambassador **Sept. 2026 – Present**

UCF Center for Initiatives in STEM (iSTEM) *Orlando, FL*

- Representing UCF Computer Science at **5+** K-12 school visits and campus events, reaching **6000+** students
- Designing and leading hands-on **robotics** demos introducing K-12 students to **decision making and computational theories.**

Software Engineer Intern **Sept. 2025 – Present**

UCF Transfer Connect *Orlando, FL*

- Automated Excel lookups for databases of **40000+** cells, increasing efficiency by **200%**, through the development of a **C** program for optimization.
- Decreased task completion time by over **50%**, automating the detection of data inconsistencies across **300+** files.
- Developed a tool that processes **3000+ data points** in seconds, creating a streamlined, one-click operation.

Data Science Research Intern **Jan. 2026 – May 2026**

Spatial Analysis Lab *Orlando, FL*

- Implementing **statistics** and **data modeling** in **Python** to analyze the effects of natural disasters on resource availability.
- Conducted cross-sectional research and co-authored a research paper.

Software Development Research Intern **Dec. 2025 – Jan. 2026**

METIL Lab *Orlando, FL*

- Engineered a $**15.8k** defense system proposal for autonomous drone-related collisions that impacts civilians, sponsored by the **Oak Ridge National Laboratory**, and implemented a pipeline using **Python/PyTorch** and **ROS 2**.
- Optimized **AI-based computer vision** and fluid mechanics to mitigate V-SLAM optical flow vulnerabilities, targeted a **99%** collision-avoidance success rate in real-time simulations.

Guest Speaker Assistant and On-site Organizer **Nov. 2025**

BSides Jax *Jacksonville, Florida*

- Managed on-site logistics for **15+ volunteers** and **250+ attendees** to ensure 100% operational efficiency.
- Reduced technical risks for **6+ guest speakers** by addressing **hardware/software issues** to ensure zero downtime.
- Compiled data to optimize a **43,000 square foot venue** for **15+** sessions to enhance attendee experience.

Projects

Parallel Computing for Hospitals | *R, Linux, Slurm, Bridges-2 Supercomputer, Parallel Package* **Dec. 2025**

- Parallelized data processing by establishing SSH connections to **Bridges-2 Supercomputer**, using **256+ CPU cores**, reducing execution time by **85%+**.
- Implemented **Slurm** to automate resource allocation, optimizing memory usage by **35%**.
- Utilized the **R Parallel** package to convert serial algorithms into parallel processes to handle **10,000+** computations.
- Maintained **99.9%** pipeline dependability on Extreme Shared Memory nodes (**2TB+**).

LeetField | *React, GSAP, Vite, TypeScript, Tailwind CSS, Google Gemini API, Github* **Sept. 2025 – Dec. 2025**

- Led **full-stack integration** of a Stardew Valley-esque and LeetCode gamified website application for **Girls Who Code** with technical prep to reduce user blockage time by about **40%**.
- Developed a modular frontend and backend, accessing **2,500+** algorithmic problems and **15+** reusable components.
- Integrated **Google's Gemini API**, processed natural language queries in **C++, Python, and Java** and to delivered debugging feedback in under **500ms**.
- Managed repository integrity and **CI/CD workflows** over feature branches, enforcing push/pull protocols.

Skills

Languages: C, C++, JavaScript, Python, Java, TypeScript, SQL, R, HTML/CSS
Frameworks & Libraries: React, Next.js, Node.js, Tailwind CSS, PyTorch, GSAP, AWS, Slurm, Vite, Lambda, Git
Concepts: AI/ML, Computer Vision, Digital Twins, Cybersecurity (Blue Team), Parallel Computing, CI/CD