

Edosa Justice Aigbuza

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EDUCATION

- **University of Texas at Arlington** Arlington, TX
Bachelor of Science in Software Engineering *Expected May 2026*
 - **Relevant Coursework:** Data Structures and Algorithms, Software Design Patterns, Object-Oriented Programming, Artificial Intelligence, Software Testing, Operating Systems, Linear Algebra
 - **Programming Languages:** C, Java, C#, SQL, SQLite, JavaScript, Python
 - **Web:** HTML, CSS, Tailwind CSS, React.js, Next.js, Node.js
 - **Databases** MongoDB, SQLite
 - **Frameworks Tools:** Flask, TensorFlow

PROJECTS

- **Outfit Detection Web Application - Hackathon Finalist** October 2025 - Present
Python, Flask, TensorFlow, OpenCV, Node.js, MongoDB, HTML, CSS, JavaScript
 - Designed and deployed a full-stack AI-powered fashion assistant that detects and classifies **3 +** clothing items per image with **92% model accuracy using a TensorFlow CNN**.
 - Integrated **Flask + Node.js backend with MongoDB** to store user outfit data, enabling persistent access to uploaded images and generated outfit combinations.
 - Developed a responsive frontend that allows users to upload outfits, scroll through previously uploaded outfits using a horizontally paginated UI, and view popups detailing clothing items from head to toe.
- **Automated Plant Care Monitoring Dashboard** Aug 2025 - Present
Tools Used: React, Python, Flask, C, Raspberry Pi 4, SQLite, HTML/CSS/JS
 - Developed a **multithreaded IoT system** on a Raspberry Pi 4 using Python and Flask that automated plant care through real-time soil moisture, temperature, humidity, and light monitoring, achieving **98% data collection reliability**.
 - Engineered backend services with Flask that processed sensor data every 2 seconds and automatically triggered water pumps and grow lights, reducing manual intervention by **80%**.
 - Integrated an SQLite database for logging sensor readings and pump activity and implemented interactive frontend charts to visualize historical plant growth and environmental trends for long-term analysis.
- **MavGrades - ACM**
React, JavaScript, Next.js, Tailwind CSS, SQLite
 - Deployed an interactive **grade distribution visualization platform** for UT Arlington professors, using React and Next.js, accumulating 10,000+ users and **500+ daily active users**
 - Optimized a **RESTful API** with **Node.js** and **Next.js**, leveraging an **LRU cache** to efficiently handle dynamic search and filter queries against **SQLite** database, reducing query response time by **45%**
 - Managed an **SQLite** database containing over **50,000** grade entries and implemented query strategies, enabling the platform to deliver up-to-date and accurate data for all course at UTA

LEADERSHIP EXPERIENCE

- **Scrum Master – Automated Plant Care System**
University of Texas at Arlington
 - Led a cross-functional team of 6 students in developing a smart device that automates plant care using Raspberry Pi and Arduino.
 - Facilitated Agile SCRUM ceremonies such as sprint planning, daily stand-ups, and retrospectives to keep the team aligned and productive.
 - Oversaw backlog management, task distribution, and sprint goal tracking, improving sprint velocity by 20%.