Essence Wallace

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EDUCATION

Bachelor of Science in Computer Engineering   **Anticipated: 05/2026**
Bethune-Cookman University (B-CU)   GPA: 3.24/4.00
Associates of Arts in General Studies   **Spring 2022**
Daytona State College (DSC)   GPA: 3.8/4.00

SKILLS

- Languages: Python, Java, JavaScript, HTML/CSS, R, Bash
- Developer Tools: VS Code, PyCharm, IntelliJ, Eclipse, Linux, Git, Tkinter
- Computer Vision & AI: OpenCV, Ultralytics YOLO, DeepFace
- Data Processing & Analytics: NumPy, Pillow
- Frameworks & Libraries: Flask, CustomTkinter

RELATED EXPERIENCE

Robotics Intern   07/2023 – 08/2023
Air Force Research Lab | Materials and Manufacturing Directorate   Dayton, Ohio
- Developed a Python-based system to enable a UR10e robotic arm to inspect and analyze 2D objects for defects without causing damage.
- Applied nondestructive testing techniques in a high-paced robotics lab setting to improve speed and accuracy of evaluations.
- Proactively expanded expertise in machine learning, robotics, Linux, and linear algebra through independent study and hands-on experimentation.

Research Assistant   01/2024 – 10/2024
Bethune-Cookman University   Daytona Beach, Florida

- Set up a GPU-enabled Python environment with PyTorch and OpenCV for robotics applications.
- Explored YOLO-based object detection for real-time robotic gaze tracking.
- Gained hands-on experience with embedded systems, and computer vision tools.
- Supported research on emulating mammalian gaze fixation in robotic platforms.

Black Enterprise Be Smart Hackathon   11/14/2024 – 11/16/2024
Southeast Con   Charlotte, North Carolina

- Created and presented the project idea and name: Career Campus, an AI-powered academic advisor.
- Assisted in user experience design and delivered the final pitch presentation to judges.

AI/ML Research Intern   05/28/2025 – 08/02/2025
Air Force Research Lab | Department of the Air Force Artificial Intelligence   Daytona Beach, Florida
- Developed a Python-based GUI using Tkinter to stream and control up to 4 real-time IP camera feeds via OpenCV.
- Implemented multi-threaded streaming, snapshot capture, and video recording features for low-latency processing.
- Collaborating on facial recognition integration to support future AI surveillance and robotics applications.

LEADERSHIP

National Society of Black Engineers   09/2023 – Present
President | Chapter Founder
- Founded and currently leads the Bethune-Cookman University chapter of the National Society of Black Engineers (NSBE), creating a support network for Black engineering students.
- Grew membership by 250% and significantly increased chapter engagement through strategic programming and leadership.

Circle K International   01/2023 – Present
President
- Oversaw chapter operations, including coordinating service initiatives, leadership retreats, and general body meetings to foster member involvement.
- Raised chapter service hours from 0 to 250+ by organizing health and wellness drives, community cleanups, and local outreach projects.