Bakare Oluwatobiloba Olukayode

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Profile

Mechatronics Engineering graduate with a strong foundation in data analytics, robotics, and industrial systems, proficient in tools like Python and C++ for microprocessor programming (Arduino, ESP). I have hands-on experience from projects including 'Control of a Four-DoF robotic arm via Bluetooth' and 'Development of a Self-Navigating Firefighting robot'. Internship Experiences at Schneider Electric, Ikeja Electric, independent programming projects, and volunteer work have sharpened my technical expertise, teamwork, and communication skills. Curious, resilient, and passionate about emerging technologies, I am eager to contribute fresh ideas and problem-solving skills to create impactful solutions and shape the future of engineering and robotic systems.

Education

BELLS UNIVERSITY OF TECHNOLOGY, OGUN STATE | SEPTEMBER 2020 - JULY 2025

B.Eng. Mechatronics Engineering | CGPA: 4.42/5.00

Experience

PYTHON PROGRAMMER | INDEPENDENT | JAN 2022 – PRESENT

- Applied mastery of python fundamentals, data types and experience with multiple libraries and APIs for various applications.
- Developing a smart literature review tool using Natural Language Processing
- Developed a 2-player tic-tac-toe game using the concepts of Object-Oriented-Programming and the pygame library.
- Developed a python script for the automation of Excel processes, cutting down processing time by 90% while minimizing error.

CHANNEL SALES INTERN | SCHNEIDER ELECTRIC | APRIL 2024 – SEPTEMBER 2024

- Supported channel partners with customer service and product price lists.
- Designed a Bluetooth-controlled 4-DOF robotic arm using Arduino and MIT App Inventor.
- Contributed to installation and testing of control panels.
- Monthly townhall meetings, which offered leadership exposure, cultural belonging, strategic clarity, and early networking opportunities.
- Participated in programs to enhance product visibility and raise customer awareness at Alaba International Market.

ENGINEERING INTERN | IKEJA ELECTRIC | JUNE 2023 – SEPTEMBER 2023

- Automated Excel workflows with Python (pandas, openpyxl), achieving a 90%-time reduction.
- Data analytics using advanced Excel functions LOOKUP. VLOOKUP, Pivot Tables, and visualization of data using Excel charts and Power BI
- Conducted transformer tests (Insulation Resistance Tests, Oil breakdown Tests, Current Injection Tests, Winding Resistance Tests, and Transformer Turn Ratio Tests)
- Analysis of safety incident cases and presentation of findings

- Participated in the Nigeria Energy Conference 2023, which offered exposure to industry trends, hands-on networking opportunities for collaboration and growth.

VIRTUAL ASSISTANT | FREELANCE | MARCH 2019– JUNE 2025
- Analyzed datasets in Excel and created charts to visualize key insights for Orile-Agege General Hospital.
- Transcribed video and audio content on leadership into accurate written documents for staff training.
- Book review and Data Analysis/Visualization for a five-year data review (2016–2021) of OAGH.
- Data collection and part analysis of the dissertation of "An Assessment of The Impact of The National Health Insurance (NHIS) on Dental Care in Lagos State."

Volunteer Experience

VOLUNTEER | ORILE-AGEGE GENERAL HOSPITAL AUGUST 2025
- Volunteered at the OAGH Back to School Health One Week Outreach that provided free health check-ups for 2,500 kids.
- Assisted in organizing and arranging children for screenings and education, ensuring smooth program flow.
- Assisted in record keeping for dental procedures.
- Collaborated with healthcare teams and fellow volunteers, reinforcing the value of teamwork and service.
- Developed interpersonal skills and adaptability in a high-energy, people-focused environment.

Projects

CONTROL OF A FOUR-DOF ROBOTIC ARM VIA BLUETOOTH | AUGUST 2024
- Designed the electrical circuit using TinkerCAD and assembled a 4-DoF robotic arm
- Developed an Arduino sketch using C++ to direct joint movements
- Built a custom app to via the MIT App Inventor for remote manipulation of the arm
- Achieved smooth and responsive real-time control of all four joints with minimal latency over Bluetooth.

SELF-NAVIGATING FIREFIGHTING ROBOT | JULY 2025
- Designed the robot's electrical circuit using Fritzing and selected suitable components for sensing and actuation.
- Assembled the full robot, integrating sensors, actuators, and power systems
- Developed control logic to coordinate autonomous navigation, fire detection, and extinguishing.
- Developed Arduino sketch to implement control logic
- Robot could successfully detect and avoid obstacles, and autonomously detected and extinguished controlled fires in test labs.

Skills & Abilities

Technical skills	Soft skills
· Python (pandas, pygame, NLP basics, API usage) · ROS2, Rviz, Gazebo · Embedded systems (Arduino, ESP32) · Circuit Design · Microsoft Office (Word, Excel, PowerPoint, Power BI) · Research	· Excellent interpersonal and communication skills · Keen sense of curiosity · Willingness to learn and improve

Certifications

- John Craig's Introduction to Robotics (Ongoing)
- Salesforce Certified AI Associate (April 2025)
- The Raspberry Pi platform and Python programming for the Raspberry Pi, University of California, Irvine & Coursera (July 2024)
- The Arduino platform and C programming, University of California, Irvine & Coursera (June 2024)
- Introduction to the Internet of Things and Embedded Systems, University of California, Irvine & Coursera (May 2024)

Awards

- Academic Excellence: Overall Best Student in Technology, November 2020
- Academic Excellence: Best Graduating Student in Further Mathematics, November 2020
- First position in the Chief B.B Majekodunmi Essay Competition Senior Category, July 12, 2018
- Overall best graduating student, Blooming Lights Montessori School, 2014

Activities and Interests

Running, chess, gaming, robots, volunteering, table tennis, swimming