Chibuike Chigbundu

Mechatronics Engineer || Machine Learning Engineer

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PROFILE

I am Chibuike Chigbundu, a first-class Mechatronics Engineering graduate with a great passion for building smart, energy-saving and useful tech. I am also proficient in training models, programming languages needed to code and building proper IoT technologies. I am eager to learn and show up to make myself better.

EDUCATION

Bells University
Mechatronics Engineering (BEng)
10/2020 – 07/2025 | Ota, Ogun State, Nigeria

PROFESSIONAL EXPERIENCE

Automedics Limited 03/2024 – 08/2024
Mechatronics Engineer Lagos Nigeria

- Performed diagnostic scans on various vehicle brands including Mercedes-Benz, Toyota, Hyundai, Mitsubishi, Ford, and BMW.
- Conducted routine vehicle servicing: oil changes, oil filter replacements, spark plug changes, throttle body cleaning, and lube services.
- Assisted technicians in troubleshooting engine, coolant, electrical, and battery faults; supported timing reset procedures and jumpstarting operations.
- Carried out mechanical repairs including removal and replacement of hubs, brake discs, control arms, shocks, springs, and drive shafts.
- Removed and reinstalled cooling fans, fuel filters, silencers, and assisted with fuel tank removal for multiple vehicle models.

Green Fuel Limited 08/23 – 10/23
Mechanical Engineer Ota, Nigeria

- Collected and recorded compressor operational data (pressure, temperature, motor current, oil levels).
- Assisted in mechanical maintenance of compressors, including pipe welding, piston servicing, cooler flange replacement, and water pump handling.
- Conducted hose replacements, crankcase oil servicing, and routine scheduled maintenance.
- Managed waybills, gas quantity calculations, and basic store inventory duties.
- Ensured daily cleaning and safe operation of compressors; received safety training on fire extinguishers.

SKILLS

Machine Learning & AI

• Deep Learning frameworks: Artificial Neural Networks (ANN), CNNs, RNN/LSTM basics, training workflows.
• Unsupervised Learning: Clustering (K-Means, DBSCAN), PCA/Dimensionality Reduction, Anomaly Detection.
• Data Handling: Feature engineering, model evaluation, cross-validation, data preprocessing pipelines.
• Frameworks & Tools: TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Matplotlib.

Embedded Systems & Mechatronics

• Microcontrollers & Boards: Arduino (Uno, Mega, Nano), ESP32.
• Programming: C and C++, embedded logic design, hardware–software integration.
• Robotics/Mechatronics Experience: Sensor integration, motor control (DC, Servo, Stepper), circuit design, prototyping.
• Tools: Proteus, MATLAB Simulink (basics), Multisim.

Backend Development

• Frameworks: Flask, FastAPI.
• API Development: RESTful API design, authentication, routing, middleware.
• Database Experience: SQL (SQLite, PostgreSQL basics), NoSQL (Firebase, DynamoDB basics).

PROJECTS

3D laser Scanner for Product Design 10/2024 – 08/2025

• Designed and built a full 3D laser-scanning system using Arduino Uno, NEMA 17 stepper motors, motor driver, IR distance sensor, and a custom 3D-printed mechanical assembly on a wooden frame.
• Developed the complete software logic to convert IR sensor readings to point-cloud coordinates, achieving successful object scans with limited but functional angular resolution.
• Processed the scanned data in MeshLab to reconstruct 3D models for design analysis.
• Led the project end-to-end — electronics integration, mechanical design, firmware, calibration, and point-cloud pipeline.

Miniature F1 car 04/2023 – 07/2023

- Constructed a miniature F1 car from scratch, designing the hardware layout and assembling all electromechanical components.
- Used **Arduino** (and briefly **ESP32**) to interface motors, steering system, and onboard electronics.
- Contributed majorly to hardware design, Veroboard circuitry, and system integration while collaborating on early-stage control logic for operation.

Fingerprint-Based Class Attendance System 10/2022 – 06/2023

- Engineered an automated fingerprint attendance solution using **Arduino Uno**, fingerprint module, navigation buttons, and an LCD interface.
- Integrated **SD card storage** and **WiFi module** for seamless cloud synchronisation of attendance logs.
- Implemented fingerprint registration, matching, and data logging to support efficient attendance management for large university classes.
- Built and wired the full system using **Veroboard**, ensuring stable and robust circuit connections.