DANIEL AYEDEGBE
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Location: London, UK

PERSONAL STATEMENT

- Mechatronics Engineer with hands-on experience delivering end-to-end automation systems, from mechanical design and control integration to data-driven troubleshooting.
- Skilled in PLC/HMI programming, Python, SolidWorks, and machine learning techniques such as ARIMA and Fuzzy Logic.
- Holds an MSc in Mechatronics and approaches problems with a practical, collaborative mindset.

KEY PROJECTS

- **Automated Dispensing System**
  Designed and deployed a microlitre-precision fluid dispensing system, improving dosing accuracy and consistency in lab experiments by over 95%.
- **Autonomous Rover System**
  Programmed a sensor-guided rover using LabVIEW; custom-built and soldered PCB breakout boards, enhancing signal stability and reducing sensor latency by ~30% during indoor navigation trials.
- **Smart Traffic Light System**
  Built and installed an adaptive PLC-controlled traffic light system with real-time sensor input, reducing intersection wait times by ~10% during pilot testing and achieving >99% uptime through renewable energy integration.

PROFESSIONAL EXPERIENCE

Sava Technologies, London, UK | *Mechatronics Engineer (Placement) – Manufacturing Department* | *October 2024 – April 2025*
A Health-tech startup building a portable molecular tracker for real-time hormone monitoring, backed by $8M in seed funding

- Prototyped mechanical components in SolidWorks and optimised iteration cycles using Cura and FDM 3D printing.
- Developed control logic and integrated hardware components using C++ and embedded programming for micro-volume dispensing with ±5% accuracy.
- Created and implemented data logging scripts in Python to capture and analyse 10k+ sensor data points per test run, improving fault detection speed by 25%.

British American Tobacco, Ibadan, Nigeria| *Maintenance Engineer – Primary Manufacturing Department | September 2021 - March 2022*
Global FMCG company and one of the world's leading tobacco groups, operating in over 180 markets with a focus on innovation and supply chain excellence.

- Created a digital parts catalogue to replace manual tracking, improving the accuracy of maintenance scheduling and reducing unexpected downtime by >30%
- Used SAP PM to plan and execute preventive maintenance; analysed machine failure data with Lean IWS tools to identify root causes and prioritise interventions, increasing response time by >20%
- Conducted ROI and root-cause analyses to support data-driven decision-making on spare part stocking and machine replacement, reducing out-of-order incidents by >80%
- Redesigned and fabricated machine components for rapid on-site replacement, cutting average changeover time by 12% (est.).
- Led regular team briefings and improvement meetings, strengthening cross-functional communication and reporting skills to facilitate daily momentum.

Automation Engineering Academy, Lagos, Nigeria | *Automation Engineer | January 2021 - August 2021*
A technical training and solutions centre focused on industrial automation, control systems, and smart infrastructure across Nigeria.

- Developed and deployed smart traffic control systems powered by solar, battery, and wind energy, ensuring >99% uptime in grid-unstable areas.
- Programmed PLCs (ladder logic) and designed HMI interfaces to visualise traffic flow and trigger adaptive signal changes, improving operator visibility and control by 90%.
- Benchmarked and integrated sensor inputs, including traffic cameras and vehicle detectors, for real-time PLC decision-making.
- Led training sessions for local traffic authorities and junior engineers on system operation and troubleshooting protocols, reducing technical intervention by 30%
- Assisted in on-site commissioning and testing of installations, validating sensor logic, signal timing, and fault recovery.

Other Projects

- Diabetes Test Strip Manufacturing Equipment
- Non-Destructive Testing System

TECHNICAL SKILLS

- **Programming:** Python, JavaScript, SQL, HTML, C, C#, Visual Basic
- **Control Systems & PLCs:** Siemens TIA Portal, MATLAB, RS Logix 5000, HaiWell, Arduino, Raspberry Pi, SCADA concepts (exposure to industrial SCADA platforms), VFD's, CNC basics (e.g. "CAM toolpath generation, G-code simulation for prototyping")
- **CAD/Simulation:** SolidWorks, AutoCAD, LabVIEW, basic PCB layout.
- **Web & HMI:** HTML, CSS.
- **Data/Analysis:** ARIMA, Fuzzy Logic, Neural Networks, Research Methods, Microsoft Excel, Word, Teams; documentation and reporting, BOM documentation, Embedded controller wiring & test, Bills of Materials (BOM) creation

KEY STRENGTHS

- PLC/HMI programming for industrial systems
- Mechanical design and fabrication
- Prototyping & troubleshooting complex assemblies
- Collaborative project delivery under tight deadlines

EDUCATION

University of Strathclyde, Glasgow, Scotland
MSc Mechatronics Engineering and Automation
January 2023 - January 2024

- Dissertation: Enhanced accuracy in hourly appliance usage forecasting for smart energy management using ARIMA predictive models and Fuzzy logic with python.
- Key Tools: SolidWorks, Python, Fuzzy Logic, ARIMA, Neural Networks.
- Modules: Mechatronic Systems Design, Intelligent Systems, Risk Management

Afe Babalola University, Ado-Ekiti, Nigeria
B. Eng. Mechatronics Engineering
September 2016 - September 2020

- Final Project: Designed and fabricated a digital range-measuring and level-sensing device.
- Gained knowledge in Visual Basic, Python, MATLAB, C, C#, and circuit systems
- Simulated electromechanical machines and conducted control system experiments using FESTO and FluidSIM.

INTERESTS

- Innovative technology solutions, Sustainable energy systems, Robotics, Automation, Tinker with Arduino builds in my spare time, playing the piano, football, sketching product design at leisure.