Dickson Tawiah Aman

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PROFILE

A motivated and versatile Aerospace Engineering graduate with expertise in UAV design, Mechanical and Electrical Systems, Embedded Systems, Computer aided design and Manufacturing, and Sustainable Engineering. Passionate about driving innovative solutions for sustainability challenges while enhancing mechanical and electrical efficiency. Skilled in engineering design, system analysis, maintenance, metrology and team collaboration with a proven record of delivering successful project outcomes. Seeking challenging roles in Mechanical, Electrical, System, Maintenance, or Sustainable Engineering with opportunities for growth and meaningful contributions.

SKILLS

Technical Skills:

- **Mechanical Design & Simulation:** Siemens NX, Solid Edge, SolidWorks, ANSYS, AutoCAD, CATIA, Revit, Simulink.
- **Electrical Systems & Programming:** CNC programing (G and M codes), Python, Java, Kotlin, MATLAB, C, C++, Arduino, STM32, PLC, Linux, Proteus, KiCad ,PCB Design.
- **Sustainable Engineering Technologies:** Renewable energy systems, eco-friendly engineering practices, sustainable irrigation design.
- **Data Analysis & Visualization:** Microsoft Excel, Power BI.
- **Hands-on Skills:** metal work ,wood work, Painting, Machine assembly, Engine servicing, CNC setting.

Soft Skills:

- Leadership, Collaboration ,Technical Assistance ,Project Management, Problem Solving, Communication.

EXPERIENCE

Maintenance Engineer– Premier Inn Hotel , Bromley (*December 2024 -Present*)

- Carry out Preventive and corrective maintenance on automated doors, Fire Alarm systems, , Plumbing , HVAC and Electrical Systems.
- Schedule and liaise with external engineers on maintenance issues
- Manage and audit budget for maintenance .
- Provide emergency first aid

Freelance Technical Assistant — CTN Technologies (*March 2023 – October 2024*)

- Delivered training on UAV design, electrical systems, and control systems fundamentals.
- Consulted on drone applications to enhance efficiency and sustainability across diverse industries.

Engineering Support — Ollennu Farms & Investments (*Sept 2021 – Oct 2023*)

- Designed sustainable systems for irrigation, sewage treatment, and water storage, significantly reducing resource waste.
- Re-engineered mechanical tools and automated systems, boosting productivity and extending equipment life span.

Maintenance Engineering Trainee — Ghana Air Force Aviation College *(Nov 2021 – Nov 2023)*

- Gained hands-on expertise in aircraft mechanical systems and avionics , including hydraulic and pneumatic subsystems.
- Performed system inspections, maintenance, and safety checks to uphold operational standards.

EDUCATION

Kwame Nkrumah University of Science and Technology (KNUST) — Kumasi, Ghana
BSc. Aerospace Engineering *(January 2021 - August 2024)*
First Class Honours

- **Key Courses:** Aerodynamics, Propulsion, Thermodynamics, Fluid Mechanics, CAD & Manufacturing, CNC Programming, Renewable Energy, Control Systems, Aerospace Vehicle Design, Programming for Engineers.
- **Affiliations:** Royal Aeronautical Society (Student Affiliate)
- **Achievements:**
  - Certificate of Honor in UAV Training.
  - Recognized as Best Academic Tutor 2023/2024.
  - Awarded for Best Final Year Project in Hybrid Engine Development.

Corporate Finance Institute (CFI) — Vancouver, Canada
FMVA® Certification *(June – July 2022)*

- **Courses:** Financial Modelling, Corporate Finance, Budgeting, Advanced Excel for Financial Analysis.

PROJECTS

- **Hybrid Turbofan Engine Control & Sensors System** — *(April 2024 – August 2024)*
  Designed a sustainable hybrid engine with temperature sensor technology and control systems for optimal fuel management.
- **Radar Surveillance System Design** — *(March 2023 – Oct 2023)*
  Engineered a sustainable radar using ultrasonic sensors and a GUI interface, optimizing energy efficiency.
- **RC VTOL with Obstacle Avoidance System** — *(April 2024 – August 2024)*
  Built and programmed a Vertical Take-Off and Landing (VTOL) tricopter with an energy-efficient obstacle avoidance system.
- **Rocket Flight Computer Development** — *(March 2023 – Oct 2023)*
  Developed a sustainable flight computer for rockets, incorporating altitude tracking and safe deployment mechanisms.

CERTIFICATIONS

- Professional Software Programmer (C & C++) — *Dec 2020*
- UAV Training Certification — *Jan 2022*
- Principles of Occupational Health & Safety Management — *Dec 2022*

- Cybersecurity: Threats & Attack Prevention — *Dec 2022*
- Ghana Air Force Practical Maintenance Engineering Training — *Nov 2023*
- FMVA® Certification — *July 2022*
- Emergency First Aider – *February 2025*