

Ifeoma Nwankwo

Systems Engineer | Software Development | Regulated Environments

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SUMMARY

Specialised in software development and systems integration, utilising technologies such as C#, Python, and web frameworks (HTML, CSS, JavaScript). Experienced in managing the complete software development lifecycle, including requirements definition, documentation, validation, and compliance, particularly within regulated environments. Familiar with V-Model development lifecycle principles and ISO/IEC 15288 systems engineering processes. Knowledgeable about compliance standards such as GxP and FDA 21 CFR Part 11. Able to support cross-functional initiatives, perform risk assessments, and provide technical solutions that align with operational, quality, and regulatory objectives.

WORK EXPERIENCE

Systems Engineer

January 2024 – Current

Abbott Laboratories, Witney, Oxfordshire

- Developed and maintained C# .NET Blazor/Razor FSM workflow applications, integrating frontend components with backend APIs and automation logic.
- Authored production-grade software within an Agile SCRUM/DevOps team, ensuring compliant, high-quality solutions for medical device manufacturing systems.
- Designed and optimized finite state machine (FSM) workflows for process automation and orchestration.
- Acted as a Product Owner, defining technical requirements and contributing to database design, analytics, and reporting solutions.
- Managed the DevOps sprint backlog and supported CI/CD pipelines for efficient, reliable software delivery.
- Supported sensor manufacturing systems through software validation, database performance optimization, and data-driven process improvements.

R&D Systems Engineer – Graduate Systems Engineer

January 2023 – January 2024

Abbott Laboratories, Witney, Oxfordshire

- Development of PowerApps applications to support departmental capacity and demand estimations. Reduced planning administrative workload by 40% through PowerApps automation
- Authored Power BI dashboards to understand manufacturing limitations and improve capacity and demand estimation within the R&D department.
- Designed and implemented bespoke software using Python to fulfil department requirements.

Quality Engineer – Graduate Systems Engineer

January 2022 – January 2023

Abbott Laboratories, Witney, Oxfordshire

- Implemented MES Solutions using Visual Basic and C.
- Integrated MES with ERP and other systems. Troubleshoot and resolved MES-related issues.
- Ensured compliance with healthcare industry standards.

Systems Validation Engineer – Graduate Systems Engineer

January 2021 – January 2022

Abbott Laboratories, Witney, Oxfordshire

- Led the Cybersecurity Programme, documenting cyber controls.
- Managed engineering validation trials to update legacy systems to the current operating standard.

Project Engineering Intern

September 2019 – July 2020

Sarissa Biomedical, Coventry

- Designed Photolithographic printing methods to improve dielectric layer of SMARTChip, consequently allowing the next generation of SMARTChips to be born.
- Identified and resolved faults in manufacturing procedure and developed a solution currently implemented company official quality assurance protocol – An EEPROM adapted self-designed on KiCad.

EDUCATION

Masters: Biomedical Engineering (MEng – iMechE accredited)

2016 – 2020

Aston University

First Class

CAPABILITIES

Languages: C#, Python, Java, SQL, HTML/CSS/JavaScript

Frameworks/Tools: .NET, PowerApps, Power BI, Docker, Swagger

Methodologies & Standards: V-Model, ISO 13485, GxP, FDA 21 CFR P11, Agile, SCRUM, DevOps

Database: MySQL, SAS

Validation & Compliance: Systems Validation, Cybersecurity, Regulated Environments (FDA/ISO)

Interests: Art, Baking, Gaming, General Fitness

ACHIEVEMENTS

- Women Leaders of Abbott Committee Member at Abbott
- Aston University Alumni Mentor

2022 – 2025

2024 – 2024

REFERENCES

Available upon request.