

William Dormechele

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Objective

Aspiring Production Engineer and Data Analyst with 4+ years' experience designing and maintaining robust, scalable systems for research and healthcare. Passionate about automation, cloud infrastructure, and building reliable, user-centric solutions. Adept at using Python, SQL, JavaScript and DevOps practices to deliver impactful results in collaborative, high-stakes environments.

Summary of Expertise

- Extensive experience in data analysis and visualisation using Power BI, Tableau, STATA and R.
- Proficient in developing and maintaining relational databases with SQL, enabling advanced analytics using Python.
- Skilled in presenting complex data insights in transparent, actionable formats to diverse stakeholders.
- Passionate about using large datasets to identify trends, inform strategic decisions, and deliver measurable impact.

Key Skills

- **Production Engineering and DevOps:** Automation, system reliability, monitoring, CI/CD, version control (Git/GitHub), cloud platforms (Azure, AWS basics), Linux shell scripting
- **Programming and Data:** Python, SQL, R, STATA, Power BI, Tableau, HTML, CSS, JavaScript, Flask, SQLAlchemy
- **Database Management:** MySQL, PostgreSQL, Oracle SQL, ERD design, data quality assurance
- **Cloud and APIs:** RESTful API development, REDCap API, SMS integration
- **Data Science and Visualization:** Machine learning (IBM Certified), Power BI dashboards, ArcGIS/QGIS mapping, statistical modelling
- **Collaboration:** Agile, cross-functional teamwork, technical writing, end-user training

Professional Experience

Data Manager and Analyst

Navrongo Health Research Centre, Ghana | Aug 2019 – Feb 2023

- Engineered and maintained scalable health and demographic data systems using SQL, Python, and R; automated reporting pipelines to support national health projects.
- Implemented automation for data cleaning and extraction, improving data integrity and operational efficiency.
- Developed live dashboards in Power BI to monitor study metrics and system health, supporting rapid, data-driven decision-making.
- Led backend integration projects (REDCap, SMS APIs) for automated notifications and enhanced research workflow reliability.
- Collaborated in multidisciplinary teams, translating technical requirements into practical, scalable solutions.
- Utilised ArcGIS/QGIS for spatial analysis and mapping, identifying health hotspots for targeted intervention.

Projects

Standard Operating Procedures (SOPs) Management Web Application

[GitHub Repo](#)

Full-stack Flask application for managing SOP document workflows, approvals, version control, and audit trails. Features secure authentication, task assignment, role-based access, and Excel export. Demonstrates end-to-end backend/frontend integration and reliability engineering.

Research Ethics Portal (IRB System – under development)

Web platform for managing research protocol submissions, reviewer workflows, and automated notifications. Building with Flask, SQLAlchemy, Bootstrap; emphasises production-grade reliability and operational transparency.

REDCap + SMS Integration (under development)

Integrating REDCap data collection with automated SMS alerts using Python and Twilio and Hubtel API, enabling real-time participant notifications for research studies.

Education

Master of Science in Information Technology

Bournemouth University (BU), UK | Completed: Sept 2024 | Distinction (75.67%)

Bachelor of Science in Public Health

University for Health and Allied Sciences, Ghana | Completed: July 2019 | 3.12/4.0

Certifications

- IBM Machine Learning with Python (2024)
- Microsoft Power BI Developer (2023)
- Oracle SQL Developer (2023)
- Good Clinical Practice (2019, 2022, 2024)
- Cybersecurity Training (2024, BU)
- Data + Design Developer (2023)
- Data analysis with Microsoft Excel (2023)

Professional Body

- Member of BCS, The Chartered Institute for IT (2024–Present)

Technical Interests

Production Engineering, Automation, Cloud Computing, DevOps, Databases, Data Science, Web APIs, Machine Learning, Civic Tech, Back-and-front-end Development, Cybersecurity, Compiler / Programming Language Design, Hardware, Shell Scripting

Selected Scientific Publications

See full list on portfolio/GitHub or upon request.

- **Dormechele W** et al. "Determinants of intention to conceal tuberculosis status among family members: an analysis of seven Sub-Saharan African countries." *BMC Infectious Disease* 24, 175 (2024). <https://doi.org/10.1186/s12879-024-09064-y>
- **Dormechele W** et al. "Prevalence and trend of malaria with anaemia among under-five children in Jasikan District, Ghana." *The North African Journal of Food and Nutrition Research* 4, no. 8 (2020): 285-291. <https://doi.org/10.51745/najfnr.4.8.285-291>