AIDAN ACQUAH

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Profile

I am an experienced data analyst and software engineer in both commercial and academic spaces. I worked full-time as an Analyst Programmer at Tessella Ltd, where I developed software solutions for large clients in diverse sectors, including BP, Rolls Royce, and Unilever. Following this, I began my PhD in Health Data Science, investigating how wrist-worn accelerometers could be used to better predict Parkinson's disease. I bring a unique blend of academic rigour and practical knowledge, allowing me to navigate both research environments and real-world commercial projects. I am now looking to apply my skills in industry to have a broader impact, directly benefiting consumers and making a tangible difference in their lives.

Key Skills

- Machine Learning & Data Science: Experienced in developing and applying machine learning models for health data analysis, including predictive modelling and data-driven insights using Python, R, and MATLAB.
- Technical Proficiency: C, C++, C#, Python, R, SQL, Angular.js; development of pip packages for health data applications.
- Research & Analysis: Strong research background with a focus on health data science, biomedical engineering, and wearable sensor data.
- Languages: English (Fluent), French (B2), Twi (Conversational)

Education

University of Oxford (September 2020 - Present)

- PhD in Engineering Science (Health Data Science)
- Trained in advanced data science and machine learning techniques ranging from balanced random forests to self-supervised ResNet-18 models in Python.
- Applied statistical analyses in health research, using Cox regression models in R.
- Focused on the application of wearable sensors and machine learning for Parkinson's disease prediction.

Imperial College London (2013 - 2017)

- MEng in Biomedical Engineering (First Class Honors)
- Range of subjects, including Medical Science, Programming, Signal processing

Work Experience

OxWearables Developer, University of Oxford (2022 - Present)

- Develop and maintain open-source pip packages and GitHub repositories.
- Adapt and run unit and system testing for updates made to live pip packages.
- OxWearables packages and repositories are licensed out for commercial use.

Student Researcher, GSK plc (March 2023 - June 2023)

- Conducted advanced analyses of health data using machine learning models.
- Collaborated internationally for novel digital biomarker discovery.

Programming Lab Tutor, University of Oxford (2022 - 2024)

- Delivered lab sessions in R, Python, and C++, focusing on data analysis and machine learning concepts for undergraduate and master's students.

Analyst Programmer, Tessella Ltd (September 2017 – August 2020)

- Developed and tested software for large clients, applying a range of programming languages (e.g., .NET, Angular.js, React.js) in data-intensive environments.
- Delivered production-level software and machine-learning tools for critical systems.

Key Publications & Conferences

- Acquah et al., 'Daily steps are a predictor of, but perhaps not a modifiable risk factor for Parkinson's Disease: findings from the UK Biobank.' [medRxiv Preprint]
- Presented at ICAMPAM 2024: 'Walking recognition in Parkinson's disease populations using wrist-worn accelerometers,' showcasing machine learning applications in wearable sensor data.

Open Source Contributions

- Author: actinet – pip package for activity data analysis using wearable sensors.
- Contributor: actipy, asleep, stepcount – pip packages for accelerometer data analysis.

References

Available on request.