

## Professional Profile & Pursuit

I am a highly reliable, project focused bioinformatics & data scientist.

With over 6 years of experience accrued, I have been self-driven throughout my career to both build pipelines and applications, as well as to draw-out analytical insights that are scientifically and commercially beneficial.

I am especially looking for a position as a scientist to discover, learn and build.

## Career Experience

The Royal Marsden Hospital, London

Sept 2022 – Present as Trainee Clinical Bioinformatics Scientist

- In addition to the duties mentioned in my previous RMH role, I have developed and continue to develop new **Command Line Interface Tools** for various bioinformatics tasks including uploading and retrieving data, detecting sample contamination, managing data and more.
- I work with stakeholders (clinical and research scientists) while developing CLI tools that they would need for their work.
- I am conducting research on the detection of Homologous Recombination Deficiency, and I have developed a pipeline for this purpose during my research.
- As part of data analysis in my research and clinical work I measure performance metrics and apply **Statistical Tests** to assess the significance of differences and relationships in clinical data.
- My coursework provided opportunity to once again engage in explorative data analysis, this time on single cell RNAseq data, using PCA & UMAPs where appropriate and to apply other analytical methods like **linear regression** and **gene set enrichment analysis** to pick up on biologically or pathologically relevant (sets of) genes.
- I also use non-classical statistical methods like **Machine Learning** to train models like **Random Forest** that can predict classified data. And I've corroborated and bolstered evidence for my findings by also applying methods like **Bayesian Analysis** where appropriate.
- I use **Git**, **GitHub**, **Agile** and **CI/CD** methodology in the development of all software I work on.
- I present my work to different groups within clinical genomics with appreciation for varying bioinformatic understanding.
- I contribute to and conduct **validations, verifications, audits, risk assessments**, SOP writing & their maintenance. I also **raise non-compliances**, apply **root cause analysis**, **assess clinical impact**, **suggest remedial and corrective action** when errors with clinical impact arise.

The Royal Marsden Hospital, London

Jan 2022 – August 2022 as Bioinformatician

- I managed and ran the NGS sequencing pipeline on the HPC for the analysis of various genomic data, including **WGS**, tumour & germline **Gene Panels**, **WES**, **RNAseq** and **ctDNA** data.
- I quickly developed a thorough understanding of the Clinical service and pipeline enabling me to **troubleshoot analysis issues** raised by clinical and research scientists to ensure smooth running of diagnostic service.
- I curated data stored within **MySQL database**, pulling information, adding and modifying data stored.
- I conducted research on the applications of cfDNA in early detection of cancer and its use in monitoring response to therapy and detecting Minimal Residual Disease.

UCL Cancer Institute, London

March 2019 –December 2021 as Bioinformatician

- I **developed NGS pipelines** for multiple NGS applications including **RRBS** and **WGBS**.
- I carried investigations on genetic and epigenetic data **using data science and statistical methods** contributing to publication: <https://doi.org/10.1101/2021.04.30.441940>.
- The explorative data analysis I did included, dimensionality reduction using methods like PCA & tSNE, and hierarchical clustering in search of structure and grouping in the data. I used methods like volcano plotting to look for gene promoters which have statistically significant measures of epigenetic activation or silencing.
- I worked as **bioinformatics support to lab group colleagues, inter-group collaboration** within the institute and with external researchers.
- I evaluated the best of competing open source bioinformatic software for project investigation.
- It was my responsibility to **regularly source data from public databases** to validate findings on in-house data.
- I **presented research findings and papers** to weekly lab group and journal clubs.
- I trained medical students and postgraduate researchers joining the lab in introductory bioinformatics.

**Animal and Plant Health Agency, Addlestone**

**February 2018 – March 2019 as Bioinformatician**

- Here I **developed and maintained an NGS pipeline** for salmonella serovar identification and surveillance in the UK.
- I carried out **phylogenetic analysis** of bacteria samples, including for publication: <https://doi.org/10.1016/j.vetmic.2018.11.003>.
- I wrote Standard Operating Procedures for quality control, NGS pipeline usage, Virtual Machine usage etc.
- I did bacterial DNA extraction.
- I trained colleagues and PhD students in bioinformatics techniques.

**St George's Healthcare NHS Trust, London**

**September 2013 – February 2018 as Biomedical support worker**

- I was regularly rostered on **tissue embedding** - orientating the tissue correctly in preparation for microtomy.
- I did **microtomy** - using a microtome to cut thin sections onto slides for staining.
- I also did **tissue staining** for microscopic diagnosis and prognosis e.g. immunofluorescence.
- I wrote up and maintained Standard Operating Procedures.

## Education

**MSc Clinical Science - Genomic Sciences (Clinical Bioinformatics Genomics)**

**University of Manchester, Expected completion in 2025**

**MSc Bioinformatics with Systems Biology**

**Birkbeck College, 2017**

**BSc Biomedical Science (Hons)**

**London Metropolitan University, 2013**

**Bioinformatics and Data Science Blog:** <https://dolapoa.github.io>

**IT Skills:** Strong proficiency in MS Office, **System Administration of Linux Operating Systems**. Strong proficiency in Command Line Interface, **HPC (SLURM) & VM usage**. Experienced in version control with **Git** and **GitHub**: <https://github.com/DolapoA>, and the iterative development cycle – including **Agile** plus **CI/CD** .

**Coding/Scripting Languages:** Bash, Python, R, HTML, CSS, MySQL

**Languages:** English native, beginner Spanish.

## Achievement(s) & Interests

**Award:** APHA Award for Best Lab Group, Salmonella Testing Team, 2018

I'm an avid reader and I enjoy calisthenics, cycling, football, tennis and weightlifting.