# Candidate Information

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| **Position:** | Research Fellow (Computer Scientist) |
| **School/Department:** | Centre for Cancer Research and Cell Biology |
| **Reference:** | 19/107355 |
| **Closing Date:** | Wednesday 22 May 2019 |
| **Salary:** | £33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution) |
| **Duration:** | Available until 31 March 2020 |

## JOB PURPOSE:

This post-doctoral computer scientist position will seek to utilise and extend an existing integrative platform to warehouse and analyse a wide range of data modalities being produced within a US-IRE R&D Centre to Centre (C2C) Partnership award. The overall programme is to research and develop externally-powered implants for continuous cardiovascular health monitoring. With a key role in the curation of large datasets and development of bespoke tools, it is expected the candidate will implement novel and bespoke software methods, analyses and add to the ongoing Artificial Intelligence programme within the McArt Lab in CCRCB. As part of this research project, it is important the candidate will be able to drive discovery approaches and develop software to address key hypotheses. The role will seek to build capacity between key partners to allow all parties access to an integrative and analytical data hub. The successful candidate will be expected to integrate into a multidisciplinary environment provided on site, and to interact with the key focus groups in data handling and analytics.

## MAJOR DUTIES:

1. To analyse modern 'big data' profiles generated through different data sources.
2. To curate and archive data in appropriate database technologies being developed through in-house software.
3. To develop and manage of a bespoke database's framework with connections to pertinent public databases.
4. To develop software to analyse data and assist in programming of frameworks in the project.
5. To assist in pipeline development for the processing and analysis of raw data.
6. To provide analytical expertise for data in bioinformatic analyses for the other key collaborators in the project.
7. To provide analytical outputs in defined and acceptable formats from analysis that can be interrogated by research and clinical scientists as required.
8. To support end-users to ensure data is interrogated appropriately and meets all standards for peer-reviewed publications.
9. To prioritise work on a day-to-day basis and liaise with colleagues to co-ordinate the service provision and project.
10. To work as part of the team and have excellent communication with colleagues and supervisors.
11. To prepare scientific manuscripts and presentations for peer review and publication.
12. To support the team leader with results writing and project reporting.
13. To present progress reports to the team and supervisor regularly as well as external audiences.
14. To keep abreast of the field by reading scientific literature and attending relevant meetings when possible.
15. Any other reasonable duties within the general scope of the post and competence of post-holder.

### Planning and Organising:
1. To plan and deliver the specific goals of the project and contribute to research group planning.
2. To plan for the use of research resources, data resources and workshops where appropriate.
3. To plan own day-to day activity within framework of the agreed research project.
4. To coordinate and liaise with other members of the research group over work progress.

### Resource Management Responsibilities:
1. To ensure research resources are used in an effective and efficient manner.
2. To contribute to informatics hardware and software maintenance and troubleshooting.

3.  To provide guidance as required to support staff and any team members who may be assisting with research.

**Internal and External Relationships:**
1.  To liaise on a regular basis with colleagues and research project team.
2.  To build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3.  To contribute to the School's outreach project results by establishing links with local community groups, industries etc.

**ESSENTIAL CRITERIA:**
1.  Have obtained or be within 6 months of obtaining a PhD in computer science, computational biology, bioinformatics, biostatistics, mathematics or related discipline.
2.  At least 3 years relevant research experience in a computational field.
3.  Experience of working with Linux/UNIX environments.
4.  Significant experience managing, integrating and analysing different data sources.
5.  Experience in web-enabled frameworks such as Angular and Express/Node or ASP.Net.
6.  Proficiency with a modern high-level programming language fit to machine learning and AI development/
7.  Experience creating, querying and maintaining databases, particularly SQL and Neo4J or similar.
8.  Experience with suitable analysis and plotting languages, particularly R, Python.
9.  Knowledge of high-performance computing systems and job scheduling.
10. Excellent verbal and written communicational skills.
11. Excellent organisational and inter-personal skills.
12. Ability to plan, organise & prioritise work and meet deadlines.
13. Excellent attention to detail.
14. Ability to communicate complex information clearly and efficiently.
15. Team worker, highly motivated, supportive of colleagues within the group.
16. Ability to show initiative and work independently when required.

**DESIRABLE CRITERIA:**
1.  1st Class or 2.1 undergraduate degree.
2.  Understanding of cardiovascular datasets.
3.  Experience in big data technologies.
4.  Experience of working in healthcare informatics.
5.  Track record of publications in big data analysis or software development including first authored publications in high-impact journals.
6.  Experience contributing to applications for peer reviewed research funding from national or international granting bodies.
7.  Experience of delivering tutorials on informatics based approaches.
8.  Knowledge of Tensor Flow or similar frameworks.
9.  Excellent project management skills.
10. Outstanding IT skills.