

The Company

The National Institute for Bioprocessing Research and Training (NIBRT) is a global centre of excellence for training and research in biopharmaceutical manufacturing. NIBRT is located in a world-class facility in County Dublin, Ireland. This facility is purpose-built to closely replicate a modern bioprocessing plant with state-of the art equipment and enables NIBRT to offer the highest quality training and research solutions.

For more information and insight in to working at NIBRT, please visit our website www.nibr.ie

The Department

The Systems Biology and Data Analytics Group, headed by Dr. Colin Clarke, focuses on two major avenues of research:

- Improving bioprocess monitoring, performance, automation, and yields through Machine Learning (ML) techniques and Big Data analytics, incorporating large historical data sets as well as real-time sensor data
- Furthering our understanding of CHO (Chinese Hamster ovary) cell biology through the application of multi-omics techniques, with a particular focus on next-generation sequencing

The Position

Role Overview

We are looking for a Software Developer interested in multivariate statistics, Machine Learning (ML) algorithms, and Big Data analytics to work on the development of microservices architecture and analysis software for Siemens' **MindSphere** operating system, specifically for the biopharmaceutical industry. MindSphere is an open-source, cloud-based platform developed for the Internet of Things (IoT), hosted on Azure and AWS.

NIBRT has partnered with Siemens to deliver cutting-edge software for analysis and predictive modelling of bioprocess data, as well as automated replication and optimisation of individual product batches or entire production lines. This NIBRT-Siemens collaboration will develop the analysis software in question and test it with biopharmaceutical industry partners.

Job Functions

- Manage a specific programme of research under the leadership of the Principal Investigator and/or Project Manager and disseminate the outcomes of this research at project meetings through written reports for internal and external stakeholders
- Liaise with all project partners/stakeholders and relevant industries where necessary
- Engage in appropriate training and professional development opportunities as determined by the Principal Investigator and/or Project Manager
- Prepare and present progress reports and research findings to colleagues for review purposes
- Responsible for undertaking all assigned programming tasks including maintaining coherent and detailed code documentation
- To learn one or more new programming languages, meet with the MindSphere development team to help integrate the software with the OS
- Participate fully in the wider research and scholarly activities of the Institute within the remit and restrictions of the appointed position
- Carry out any other duties within the scope, spirit and purpose of the job as requested by the line manager
- Comply with all NIBRT policies and regulations, including those in relation to Research Ethics and Health and Safety

Requirements

Essential

- A Ph.D. in computer science, mathematics, physics, chemistry, biology, engineering, or a relevant, related discipline from an approved degree-awarding institution
- Strong programming skills in Java, C, C++, or another major JVM and/or C-family language
- Prior experience in exploratory data analysis and predictive modelling
- Experience with distributed computing and file systems (Apache Hadoop and Spark)
- Commitment to research excellence, clean coding techniques
- Demonstrable ability to adapt to change, including but not limited to: quickly learning new programming languages and analysis techniques, responding to and addressing client concerns
- Effective note-keeping, report writing, knowledge transfer and communication skills with the ability to present complex information effectively to a range of audiences
- Self-motivated with the ability to work collaboratively and as part of a team and to stick to an agreed work plan

Desirable

- Interpretation of Raman and infrared spectroscopy, mass spectrometer data
- Experience implementing ML algorithms
- Experience writing commercial software in Java
- Experience within the biopharmaceutical industry or a demonstrable understanding of biomanufacturing processes; statistical analysis of bioprocessing data
- Prior experience with microservices architectures, platforms-as-a-service (PaaS)
- Familiarity with JavaScript and Node.js
- Experience using Java Spring and other dependency-injection frameworks
- Familiarity with cloud computing platforms like Azure, Amazon Web Services
- Experience of working in multidisciplinary research teams
- Project administration skills
- Experience working within Siemens' MindSphere OS
- Consistent code commenting and documentation (Javadoc), experience with logging frameworks (SLF4J / Apache Commons Logging) and version control (git)

Terms and Conditions of Employment

- This is a two year fixed term contract of employment
- Salary commensurate on experience
- You must be eligible to work in Ireland to apply for this position

How to Apply:

To apply for this position please forward your CV, cover letter and the names and contact details of three referees in a combined PDF document to the NIBRT HR team at careers@nibr.ie. Please include your name and the position for which you are applying – **Software Developer Ref: CC/20181** - in the subject line. Please note that the successful candidate may be required to supply parchments of degrees/qualifications.

Closing date: 29th June 2018

For more information about the role, please contact colin.clarke@nibr.ie

NIBRT is an equal opportunities employer.