

## Software Engineer – Permanent

White City, London

### **The Role:**

At DNAe we are inventors of semiconductor-based next-generation sequencing (NGS) technology. Developing a medical instrument, we use DNA sequencing; the instrument detects presence of bacteria in human blood.

We at DNAe are currently looking for a Software Engineer to join our Sequencing Software Engineering Team based at our brand new offices in White City.


### **Responsibilities – General:**

We at DNAe are looking for self-starting, experienced software engineer who finds passion working on complex scientific and engineering problems. DNAe instruments produce large volumes of real time data. The role requires developing and maintaining high-throughput data analysis algorithms, data handling (new file formats), visualization and orchestration. A high level of creativity and problem solving will be essential to define, analyse and visualize the sequencing data and associated metrics. Specific activities include,

- Owner of the instrument software and digital signal processing
- Analysis and rigorous modelling of raw electronic signals generated by the DNAe NGS platform
- Develop hardware control software which needs to interact with FPGA and microcontroller firmware.
- Perform analysis of data sets generated by ongoing R&D work including but not limited to modelling of raw electronic signals generated by the DNAe NGS platform
- Drive the software through the full life cycle, including software requirements, design, implementation, testing and maintenance using Agile development methodologies

### **Person Specification:**

Our scientists and engineers thrive on working within interdisciplinary teams. You should have a practical, self-motivated approach to your work, feeling comfortable with working in a



small, dynamic start up environment. We are looking for people with a passion for their work - people who strive for exceptional results and who can deliver pragmatic solutions on time. The ideal candidate also likes to contribute to solving problems outside their field of immediate expertise and is an effective communicator.

**Required qualifications and experience:**

- MS or PhD in Computer Science, or equivalently technical discipline, or a minimum of 8 years of software product development experience
- Minimum of 3-4 years of solid software development experience using C++ and Python
- Understanding and demonstrable skills in real-time signal processing, data analysis, control theory, optimisation, pattern recognition and machine learning
- Experience in developing and documenting software for regulated environments (including design, implementation, unit tests, integration)
- Experience in using continuous integration or automated development processes
- Confident in a Linux environment and using Git as the main version control system
- Clear communication skills and proven ability to train others

**Experience in the following areas would be advantageous:**

- Working knowledge of advanced C++, Qt, CMake, GTest or valgrind
- FPGA, DSP, CUDA or GPU processor-based Platform Development
- Experience of bare-metal embedded development and OOD for embedded systems
- Past development experience in the USB device/host end application
- Experience with scientific Python libraries – PySide, SciPy, NumPy, Pandas
- Experience of the process requirements, documentation and traceability needed for regulated development. (preferably, but not necessarily IEC 62304) (e.g. military / safety-critical)

**Apply**

If you believe you meet the above criteria and would relish playing a key role in developing a revolutionary technology, we would be delighted to hear from you.

We offer a competitive compensation package to successful candidates.

Please email your CV to [careers@dnae.com](mailto:careers@dnae.com) quoting the role that you are interested in.