

# THE UNIVERSITY OF NOTTINGHAM

## Recruitment Role Profile

<b>Job Title:</b>	Research Associate/Fellow
<b>School/Department:</b>	School of Life Sciences
<b>Job Family and Level:</b>	Research and Teaching Level 4CTG/4
<b>Contract Status:</b>	Fixed Term for a period of one year
<b>Hours of Work:</b>	Full time
<b>Location:</b>	Medical School, Queens Medical Centre Campus
<b>Reporting to:</b>	Dr Matt Loose

### Purpose of the New Role:

This role is focused on developing real time web applications for the analysis of Oxford Nanopore data. Tools and pipelines will be built into minoTour, an established data analysis platform for Oxford Nanopore MinION sequencing reads. The post will focus on developing new visualizations and software enhancements to our existing platforms of tools focused on specific challenges for a group of specific users. The person appointed will be expected to plan and conduct work using approaches or methodologies and techniques appropriate to the type of research, and will be responsible for writing user manuals.

The person appointed will have the opportunity to use their initiative and creativity to identify areas for research, develop research methods and extend their research portfolio.

The post holder should have experience in web development and visualization, with a working knowledge of python, MySQL and JQuery. Biological knowledge, although advantageous, is not essential.

	<b>Main Responsibilities</b>	<b>% time per year</b>
1.	To develop and test novel visualizations and methods in our web platform minoTour focusing on sequence identification and mapping.	30%
2.	To contribute to the broader continued development of minoTour to provide an environment for rapid analysis and real time monitoring of minION runs.	20%
3.	To enable minoTour to run as a standalone platform on a local machine and develop clear and concise user documentation.	10%
4.	To develop grouped visualisations of data within the minoTour interface allowing for comparison between experiments.	10%
5.	Implement a graphical user interface for data upload in minoTour and incorporate this into the local install version.	10%
6.	To develop features enable export of all minoTour data associated with a set of user data and import of the same into another version of the minoTour platform.	10%
7.	To co-ordinate interactions with other minION researchers, for example, arranging meetings and updating web sites etc and contribute to collaborative decision making with colleagues in area of research.	5%
8.	Any other duties appropriate to the grade and role.	5%

This job description may be subject to revision following discussion with the person appointed and forms part of the contract of employment.

## Knowledge, Skills, Qualifications & Experience

	Essential	Desirable
<b>Qualifications/ Education</b>	PhD (Awarded or pending) in Bioinformatics/Informatics/Computer Science or a relevant subject area.	Master's Degree, or equivalent in relevant subject area.  Member of and registration with an appropriate Professional Body.
<b>Skills/Training</b>	<ul style="list-style-type: none"> <li>• Demonstrable significant experience with Python, MySQL, Javascript</li> <li>• Excellent oral and written communication skills, including the ability to communicate with clarity on complex information</li> <li>• Experience of complex data visualisation via HTML</li> <li>• High analytical ability to analyse and illuminate data, interprets reports, evaluate and criticise texts and bring new insights</li> <li>• Analytical ability to facilitate conceptual thinking, innovation and creativity.</li> <li>• Ability to build relationships and collaborate with others, internally and externally.</li> </ul>	<ul style="list-style-type: none"> <li>• Experience of analysing next generation sequencing data</li> <li>• Familiarity with the HDF5 file format</li> <li>• Familiarity with HighCharts.js or D3.js</li> <li>• Experience with statistical packages such as R and matLAB</li> <li>• Experience with cloud based computing applications</li> <li>• Familiarity with version control/software repositories such as GIT</li> </ul>
<b>Experience</b>	<ul style="list-style-type: none"> <li>• Experience in standards compliant Web Development</li> <li>• Experience of real time data analysis pipelines</li> </ul>	<ul style="list-style-type: none"> <li>• Experience with analysis of Oxford Nanopore Sequence Data</li> <li>• Experience of developing new approaches, models, techniques or methods in bioinformatics</li> </ul>