

## Senior Data Engineer

### Job Description

---

|                        |  |
|------------------------|--|
| Purpose                | The purpose of this role is to specify, develop and recommend high quality data and technology solutions for internal and external use                           |
| Responsible to         | Head of Data and Business Technology   |
| Direct reports         | None   |
| Internal relationships | The Senior Data Engineer will work closely with Product Managers, Data and Business Technology team members and all staff at ICNARC.                             |
| External relationships | To represent ICNARC when dealing with enquiries from relevant individuals, bodies or groups; and to represent ICNARC at meetings and conferences, when required. |
| Location/Environment   | Napier House, High Holborn / Flexible Working / Remote Working   |

### Principal duties and responsibilities

- The provision of knowledgeable advice on the specification of high-quality database creation for applications for internal and external use.
- Development of applications to a very high standard using the latest technologies, including: adherence to best practice standards; and ensuring that the applications are robust and flexible enough to cope with changing needs.
- Ongoing support and enhancements for applications.
- To develop within the Agile Project Delivery framework; Agile Dynamic Systems Development Method (DSDM).
- The production of high-quality software-related documents based within the Agile DSDM Framework using Confluence and Jira: user requirements analysis; functional specifications; technical documentation and supporting/advising the writing of user manuals by “super-users”.
- The provision of technical advice, consultancy and training for ICNARC staff, as required.
- Provide guidance on IT infrastructure changes.

### General duties and responsibilities as an employee

- To work as part of a team and contribute to the overall aims and objectives of the organisation
- To be an advocate for the organisation
- Attend staff meetings and training as required
- All staff are required to operate in accordance with ICNARC's values, policies and procedures, including but not limited to, Health and Safety, and Data Protection

The above list of duties and responsibilities is not exhaustive, and you may be required to undertake other responsibilities and training as requested and as appropriate to your role level.

### CHANGES:

This is a description of the job as it is presently constituted. It is the practice of the ICNARC to examine job descriptions from time to time and to update them to ensure they relate to the job as then being performed, or to incorporate whatever changes are being proposed. This will be conducted in consultation with you.

This job description is supported by annual objectives and performance standards to provide an indication of the level of performance expected from the role.

## Person specification

| Requirements                  | Essential   | Desirable   |
|-------------------------------|---|---|
| <b>Educational attainment</b> | BSc or equivalent; in Computer Science, Mathematics or similar  | MSc in Computer Science or Mathematics or similar   |
| <b>Knowledge required</b>     | Agile Development Framework experience and knowledge or similar   | Agile Programme Management Foundation Certification or similar qualification  |
| <b>Experience required</b>    | <p>Working with data</p> <ul style="list-style-type: none"> <li>• Data architecture including operational stores, analytical etc.</li> <li>• Understanding of data models</li> <li>• Experience of at least one database (doesn't have to be SQL Server)</li> <li>• SQL</li> <li>• An ETL tool. ETL models. (Ideally Kettle but not necessarily. SSIS, Talend, Informatica etc.)</li> <li>• Front end experience</li> <li>• Working with Pentaho c Tools</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Developing modern JS oriented apps (Jquery, html5, css)</li> <li>• Agile/Scrum (bonus – Jira/Confluence)</li> <li>• Working in a team</li> </ul> | <ul style="list-style-type: none"> <li>• <i>Desirable:</i> Performance analysis</li> <li>• <i>Desirable:</i> Working with APIs and blending data</li> <li>• Working with cloud services (Not infrastructure in the cloud, but actual cloud services)</li> <li>• Continuous automated Product release / integration (e.g. Bamboo)</li> <li>• Project leadership of single or multiple projects;</li> </ul> |

|                                      |  |   |
|--------------------------------------|--|---|
|                                      | <ul style="list-style-type: none"> <li>• All tiers of application design and development; in particular database and business layers;</li> <li>• Object-orientated design and development, database design and web-services;</li> <li>• Writing functional specifications and other technical documentation</li> </ul>                             |   |
| <b>Skills and aptitudes required</b> | <ul style="list-style-type: none"> <li>• Tools and Components of Data Architecture.</li> <li>• In-Depth Knowledge of SQL and Other Database Solutions.</li> <li>• Data Warehousing and ETL Tools.</li> <li>• Development, construction, maintenance and testing of architectures, such as databases and large-scale processing systems.</li> </ul> | <ul style="list-style-type: none"> <li>• Hadoop-Based Analytics (HBase, Hive, MapReduce, etc.)</li> <li>• Graph Databases</li> <li>• Machine Learning</li> <li>• SnowFlake</li> </ul> |
| <b>Interests</b>                     | Develops innovative solutions to work-related problems; identifies potential opportunities and ways to capitalise on them.   |   |
| <b>Personal qualities required</b>   | <i>High work standards:</i> establishes high goals for self and others; seeks challenging assignments; sets high standard for own work performance; works  |   |

|  |   |  |
|--|---|--|
|  | <p>steadily and conscientiously.</p> <p><i>Initiative/Proactive:</i> takes actions to achieve favourable outcomes for the organisation, beyond minimum performance expectations and seeks opportunities to improve work procedures.</p> <p><i>Conscientious:</i> works steadily, efficiently and dependably; checks work thoroughly for errors and omissions.</p> <p><i>Analytical thinking:</i> Identifies concerns and causes of problems and finds links between information from various sources.</p> <p><i>Creativity:</i> develops innovative solutions to work-related problems; identifies potential opportunities and ways to capitalise on them.</p> <p><i>Service orientation:</i> is courteous, patient, pleasant, and helpful with clients; shows understanding for their concerns; takes actions to accommodate their needs where possible.</p> <p><i>Flexibility:</i> adapts approach to fit with changing conditions, tasks, responsibilities or people.</p> <p><i>Communication:</i> expresses ideas in writing clearly, with correct grammar and spelling and in a well organised way; expresses ideas verbally with clarity, appropriate grammar, pace</p> |  |
|--|---|--|

|                      |  |  |
|----------------------|--|--|
|                      | and non-verbal gestures;<br>listens effectively.                               |  |
| <b>Circumstances</b> | This role offers the flexibility of working from home and in the London office |  |