

## JOB DESCRIPTION



**Title:** Data Engineer

**Reports to:** Head of Technology or GIS Manager

**Responsible for:** N/A

**Office location:** Agilysis' Banbury office, and other locations as required (including client premises and home working)

### Job Purpose

*The post holder will play an important role in the management and analysis of data within our team of experienced experts. They will take responsibility for the creation and management of data warehouses and other environments to store data, including geospatial information. They will work with other team members in processing ingestion and management of open and commercial data and ad-hoc requests for specific customers or projects. They will also have the opportunity to develop and deliver analytical tools and solutions for clients using a variety of platforms and get involved in analysing the meaning behind the data.*

### Key Responsibilities

- Responsibility for managing data sources used in Agilysis' analytical tools and research.
- Creation and maintenance of appropriate database systems and infrastructure to hold the array of transport and related datasets used by the team and to ensure they are inter-related, up-to-date, and accurate.
- Process and match datasets, especially geospatial ones, producing outputs that can be imported into other tools and products for use by the team and our clients.
- Develop and maintain critical reproducible analytical pipelines and tools supporting our solutions.
- Responsibility for ensuring the quality of ingested data and processed data. Ensuring that data issues are resolved swiftly and background processes are robust and actively monitored.
- Support others in the analysis of patterns and trends in data to inform our work for clients in the UK and overseas.
- Help clients to understand our data, providing assurance on quality and reliability, and assisting in technical support and associated materials e.g. FAQs.
- Attend training and pursue continuous professional development to advance and maintain relevant knowledge and skills.

### Knowledge and Skills

This role involves working on a wide range of projects. Post holders will demonstrate a broad selection of the skills and experience set out in the tables beneath. **It is not necessary for every Data Engineer to demonstrate every skill in every section.** We do, however, expect post-holders to be open to training and to develop their skills, where reasonable, in line with our growing and changing business.

Key Experience and Knowledge (Infrastructure)	Key Skills
Data management, RDBMS systems	Operation of SQL Server, PostgreSQL, other industry standard RDBMS.
Cloud Technologies	Basic usage and management of resources in Azure, AWS.
Operating Systems	Basic administration concepts of Windows and Linux servers.

Key Experience and Knowledge (Data)	Key Skills
Data processing	SQL programmability, DML, primarily with MS SQL Server, PostgreSQL
ETL	Common programming / scripting languages, notably Python. R desirable.
	Database integration tools, for example SSIS.
Data theory (relational, spatial, hierarchical etc)	Ability to design appropriate storage, structure and relationships for a robust data platform.
	Ability to derive accurate information from complex datasets.
Geospatial Tools, Analytics, Visualisations	ArcGIS Pro, ArcGIS Online, QGIS, ArcPy, Leaflet
Desirable: Transport Data	Knowledge of OS MasterMap Highways, OSM, STATS19, Overture, etc.

Key Experience and Knowledge (Development)	Key Skills
Coding	SQL (MS SQL, PostgreSQL), Python. Desirable: R, C#, PowerShell, PHP, Ruby etc.
	Knowledge of common algorithms and design patterns.
Integration	Basic data API principles, authentication methods, HTTP/REST, JSON, XML.
Build and Deployment	Visual Studio, other IDEs. Desirable: R Studio.
	Version Control Systems, e.g. git.
BI Tools	PowerBI Tableau, Grafana, Telerik
	Ability to transform complex and nuanced data into effective visualisations.
Agile development	Familiarity the software development processes and agile methodologies.
	Familiarity with quality assurance and testing principles in software development and automation.

## Scope and Scale

The purpose of this role is to work as part of a specialist technical team, using an in-depth knowledge of databases, data management and analysis to support a range of project and solutions.

The technical team works with the Agilysis Product Portfolio and alongside the consultancy team, providing the critical data management function, enabling access to data, providing and assisting with analysis and visualisation.

Data Engineers carry significant responsibility for the design of data warehouses and other data structures in the data platform. They take responsibility for ETL and data management processes, ensuring data and process quality at all times.

## Performance Expectations

The post holder will be appraised by their supervisor and will be responsible for regular delivery of certain standard products and projects. They will exhibit a significant degree of autonomy and should be able to work with appropriate guidance in accordance with agreed policies and procedures.

## Approval & Review

Signed:



Date: 14 August 2025

Post approved by: Tom Fosdick

This job description is due for review on:

## Job Description

### **Agilysis Limited**

*A company registered in England*

*Company registration number: 10548841*

*VAT registration number: 260 4741 19*

*Directors: D Campsall, R Owen, B Walton, K Batchelor, T Fosdick*

*Registered Office: 27 Horse Fair, Banbury, Oxfordshire, OX16 0ES*

**Title: Data Engineer**

### Business Competencies

Scale 0 - 4	Expected level of competence
Strategy and planning	2
Commercial awareness	2
Service provision (contract management, accounts, etc.)	1
Leadership and initiative	2
Changing and improving	2

### Education, Training & Qualifications

Scale 0 - 3	Expected level of competence
Educated to GCSE level or equivalent	3
Educated to A-Level or equivalent	3
Relevant University degree	2
Relevant professional qualification or certified training	2

### Key Competencies

Scale 0 - 4	Expected level of competence
Collaboration and communication skills	2
Organisational and time management skills	2
Ability to curate and implement procedures and processes	2
Microsoft Office Suite and basic IT literacy	4

Flexible working	1
English language skills, both written and verbal	2
Administration (Contracts, appraisals, Ts & Cs, general paperwork/documentation, etc)	1
Full driving licence and use of a car*	1

\*Scale 1 - 3

## Management Competencies

Scale 0 - 4	Expected level of competence
People	2
Projects	2
Finance	0
Change	2
Risk	2

## Approval & Review

Signed:



Date: 14 August 2025

Profile approved by: Tom Fosdick

This person profile is due for review on:

## Person Profile

### Agilysis Limited

A company registered in England

Company registration number: 10548841

VAT registration number: 260 4741 19

Directors: D Campsall, R Owen, B Walton, K Batchelor, T Fosdick

Registered Office: 27 Horse Fair, Banbury, Oxfordshire, OX16 0ES