

## Data Engineer

Information Pack

# The role

Ark Schools prides itself on having a sector-leading approach to information systems and data analysis. With ambitious plans to embed advanced analytical practices, we are looking for a Data Engineer to help us maintain, develop and optimise our data architecture, pipeline and flows so that they continue to support the network's analytics and reporting needs.

This is a fantastic opportunity if you would like to:

- Take on a key role in defining and delivering Ark's data and analytics platform, enabling us to fully leverage the value of the data we hold for our c.28,500 students across 38 schools
- Be pivotal in supporting the organisation to move towards advanced analytical practices
- Work for an organisation that exists to make sure that all children, regardless of their background, have access to a great education and real choices in life

If preferred, the role would be suitable for remote/flexible working, with periodic travel to Ark's central office in West London (c.2 days per week).

## About you

We encourage applications from those working within – and outside – the education sector. Applicants should:

- Have 2+ years' experience in a data engineer or similar BI role, and have attained a Graduate degree (or relevant professional experience) in Computer Science, Statistics, Informatics, Information Systems or another quantitative field
- Have awareness of best practice and emerging data systems
- Have advanced working SQL knowledge and experience working with relational databases, query authoring (SQL) as well as working familiarity with a variety of databases (e.g. Postgres)
- Be able to demonstrate a successful history of manipulating, processing and extracting value from large, disconnected datasets
- Be able to quickly understand and become familiar with new data sets – particularly if new to education
- Be aligned with the Ark Schools' vision and values

<b>Reports to:</b>	Lead Data Engineer, Data & Insight
<b>Start date:</b>	Asap
<b>Location:</b>	White City, West London (role would support remote working if preferred)
<b>Salary:</b>	£40,000 - £50,000
<b>Closing date:</b>	Sunday 15 Aug 2021
<b>First stage (online task):</b>	w/c 16 Aug 2021
<b>Second stage (interview):</b>	w/c 23 Aug 2021

*We value diversity and are committed to safeguarding and promoting child welfare. The successful candidate will be subject to DBS and any other relevant employment checks.*

## Our offer

If you join us you will receive:

- 27 days annual leave plus bank holidays, rising with each year of service
- A choice of pension schemes including a defined benefit scheme, which means you build up a guaranteed amount in your pension for every year of your employment
- Personalised learning and development. We are committed to providing high-quality professional learning throughout your career with us and offer a variety of training sessions and experiences designed to meet your needs
- Access to the Ark Rewards scheme offering savings from over 3,000 major retailers, interest-free loans available for season tickets or a bicycle and gym discounts offering up to 40% off your local gym

# Job description

## Key Responsibilities

### Data engineering

- Design and build data systems and pipelines with our chosen ETL tooling to Ark business requirements.
- Perform regular and ad-hoc configuration and optimisation of the data platform.
- Manage the deployment and configuration of all databases and servers within Ark Schools which are administered, maintained, and used by the Data & Insight team.
- Act as second line support for systems issues where they relate to the data pipeline.
- Monitor and report on service quality and availability.

### Data governance

- Support the creation and maintenance of the data dictionary and business data model.
- Ensure the security and resilience of Ark Schools data platform.
- Ensure appropriate sharing and levels of data access to consumers of Ark data.
- Build and maintain tests of our data to ensure its quality and integrity.
- Work with colleagues with responsibility for/an interest in data governance to ensure the correct handling of Ark data.

### Third party connections

- Work with new and transition academies to ensure that data from within our defined ecosystem and other data collection tools is effectively integrated into our data warehouse.
- Manage the interface between the MIS solutions, Ark's data platform and third-party systems.
- Establish and maintain integrations with third party applications.
- Commission third parties who support the Ark data platform to troubleshoot or support system issues.



### Project management

- Identify and document any requirements to extend or performance tune the Ark data platform.
- Contract with stakeholders to agree deliverables, resourcing (inc. external spend), and timelines.
- Work with colleagues in the Data and Insight team to understand structural database requirements.
- Participate in the Change Advisory Board to plan and agree changes across Ark data and systems.
- Work with the Lead Data Engineer on the design phase of new in-house projects.
- Undertake small projects as required, to improve current existing processes or to comply with new requirements.

### Other

- Perform any other duties or tasks as commensurate with the role to meet the business objectives of Ark Schools.
- Maintain a commitment to professional development and keep abreast of sector and industry developments.
- Attend relevant seminars and learning opportunities to gain knowledge on software matters, new innovations, and trends in data management.
- Support the creation and amendment of dashboards and visualisations in line with project requirements.
- Manage refreshes to ensure that analytics data is surfaced in time and without error.
- Support the management of access to the data consumption tooling

Ark exists to give every young person, regardless of their background, a great education and real choices in life.



# Person specification

## Knowledge and Skills

### Required

- In-depth knowledge of relational database systems
- In-depth knowledge of SQL and procedural scripting
- Strong database administration experience with PostgreSQL (or similar)
- Experience of ETL and replication technologies
- Working knowledge of modelling database tools
- Working knowledge of application development environments
- Experience of mixed Linux/Windows production environments
- Experience with backup and restore routines
- Experience with database security management
- Understanding of the requirements for data storage under DPA and GDPR
- Experience of writing technical documents and release notes

### Desirable

- Knowledge of MIS (Bromcom/ScholarPack) and other school software in use across Ark
- Experience with data consumption tooling (Tableau/PowerBI/Alteryx)
- Experience with cloud based ETL tooling (AWS/Azure/GCP)
- PostgreSQL Associate/Professional Level Certification
- Understanding of the specific data collection requirements in education
- Awareness of the data challenges facing the education sector

## Personal Qualities

### Required

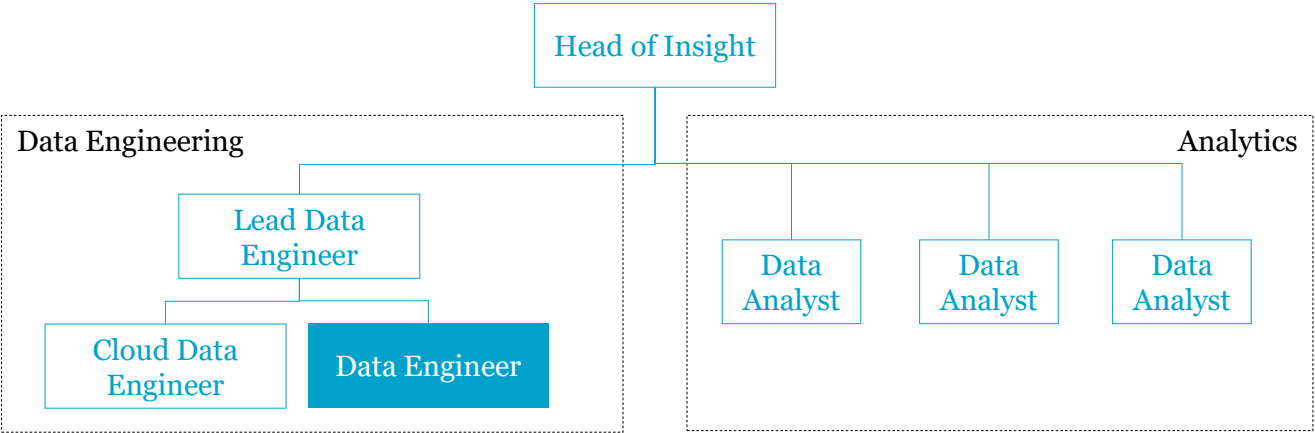
- Be passionate about the aims and values of Ark
- Be self-motivated and resilient, with a “can do” attitude
- Be able to communicate to both technical and non-technical audiences
- Be able to work calmly and pragmatically under pressure
- Be able to prioritise workloads to reflect business priorities
- Have excellent interpersonal skills, both written and oral
- Be motivated to improve standards and deliver beyond expectations
- Be output driven, with a focus on outcomes and fulfilling requirements

*Ark is committed to safeguarding and promoting the welfare of children and young people in our academies. In order to meet this responsibility, we follow a rigorous selection process. This process is outlined [here](#), but can be provided in more detail if requested. All successful candidates will be subject to an enhanced Disclosure and Barring Service check.*



# Our data vision

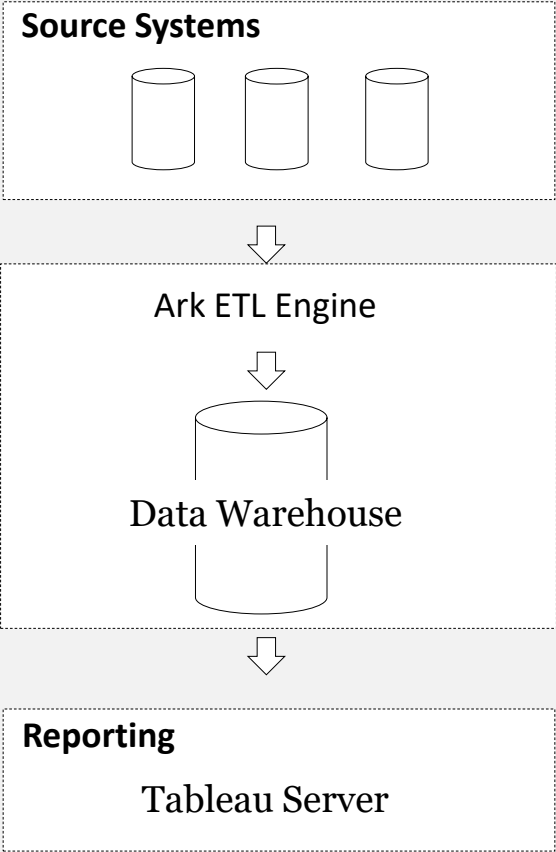
## Data and Insight Team Structure



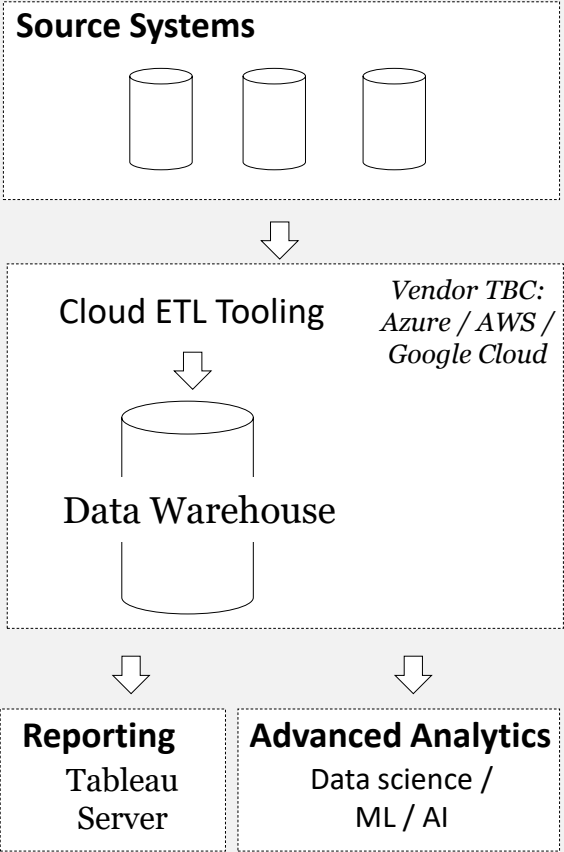
## Data Platform Vision

Ark has ambitious plans to migrate to new cloud tooling and practices, supporting advanced analytics to be deployed at scale. As a member of the Data & Insight team, you will have the opportunity to define and deliver on this vision.

### As-Is



### To-Be



# How to apply

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Apply with a CV and cover letter on our online recruitment portal. Applications are to be submitted by midnight **Sunday 15 Aug 2021** *but please note:* we will be reviewing applications on an on-going basis and this advert may close earlier than advertised depending on the level of response.

**Applicants will be shortlisted as suitable candidates are identified, so early application is strongly advised**



# About Ark

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Ark is an international charity, transforming lives through education. We exist to give every young person, regardless of their background, a great education and real choices in life. In the UK, we are a network of 38 schools, educating around 28,500 pupils in areas where we can make the biggest difference. We also incubate start-up programmes (Ark Ventures) that improve the education system.



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