










Data Engineer




WHAT DOES A DATA ENGINEER DO?

Data Engineers are responsible for building data pipelines. They develop, construct, and test the large databases and the scalable data processing systems that data scientists need to do their jobs.

Day-to-Day Expectations and Responsibilities

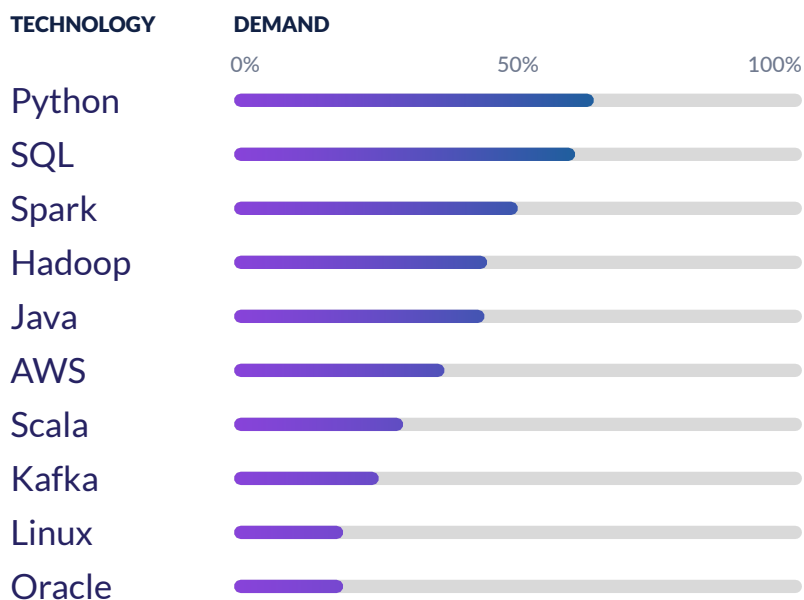
-  **Design, develop, and deploy** scalable data pipelines and data services
-  **Research opportunities** for data acquisition and new uses for existing data
-  **Integrate new data management technologies** and software engineering tools into existing infrastructure
-  **Promote best practices** that enable teams to accelerate their consumption and understanding of data
-  **Improve overall efficiency** by introducing new engineering processes and tools
-  **Understand existing systems** and recommend ways to marry disparate data sets using automation
-  **Collaborate with data scientists and researchers** to develop algorithms including prototypes, predictive models, and proofs of concept

Key Traits of a Data Engineer

-  **Creative Thinker:** Data Engineers connect the dots and see the big picture to evaluate how data insights affect the business.
-  **Collaborative:** Ability to collaborate with both internal technology and business teams as well as integration partners and customers
-  **Curious:** Data Engineers demonstrate a track record of learning and deep-diving into complex systems.

DATA ENGINEER

Trending Technology Skills for Data Engineers



*Figures represent the share of all Data Engineer job postings analyzed that require a given skill. Data as of October 1, 2018. View this week's data [here](#).

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Data Engineer Target Skill Set

Technical Skill Set

- ✓ Statistical analysis and modeling
- ✓ Database architectures
- ✓ Python, Java
- ✓ Big data processing & streaming analytics
- ✓ Experience with machine learning algorithms

Non-Technical Skill Set

- ✓ Data-driven approach to problem solving
- ✓ The ability to visualize and communicate complex concepts
- ✓ Strong sense of ownership

Starter Training Plan for Data Engineers

The following Cloud Academy courses and training plans prepare professionals to become Data Engineers. [Learn More About Training Plans >](#)

Amazon Web Services

[Introduction to Machine Learning on AWS](#)

[Applying Machine Learning and AI Services on AWS](#)

[Big Data - Specialty Certification Preparation for AWS](#)

Microsoft Azure

[Big Data Analytics on Azure](#)

[Introduction to Azure Machine Learning](#)

Google Cloud Platform

[Data Engineer - Professional Certification Preparation for Google](#)

[Machine Learning on Google Cloud Platform](#)

[Google BigQuery](#)

Industry Certification(s) for Data Engineers

After taking courses with Cloud Academy, Data Engineers can consider the following certifications.

Amazon Web Services

[AWS Certified Big Data - Specialty](#)

Microsoft Azure

[70-776 Exam: Engineering Data with Microsoft Cloud Service](#)

Google Cloud Platform

[Google Certified Professional Data Engineer](#)