

# The Impact of Data Engineering

Why It's Essential for All Your AI and Analytics Initiatives

## Lines of Business Need to Answer Key Questions



1. How can data help me predict what will happen?



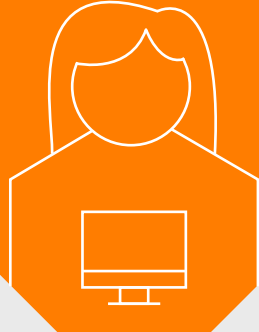
2. How can data help me understand what has happened?



3. How can data analysts and data scientists be more productive in handling business needs?

## Data Challenges

**Megan**  
The Data Analyst



Analytics Requirements:

How will I find the right data for my business insights?

How will I make this data available in my data lake?

How can I ensure I trust the data for my analytics?

I want to spend less time on data prep and more on data analysis.

I want to easily collaborate with my peers and IT for ongoing changes.

Both Megan and Logan are dealing with data challenges that can slow them down or derail their projects:

**Logan**  
The Data Scientist



AI & ML Requirements:

How will I find the right data for my modeling?

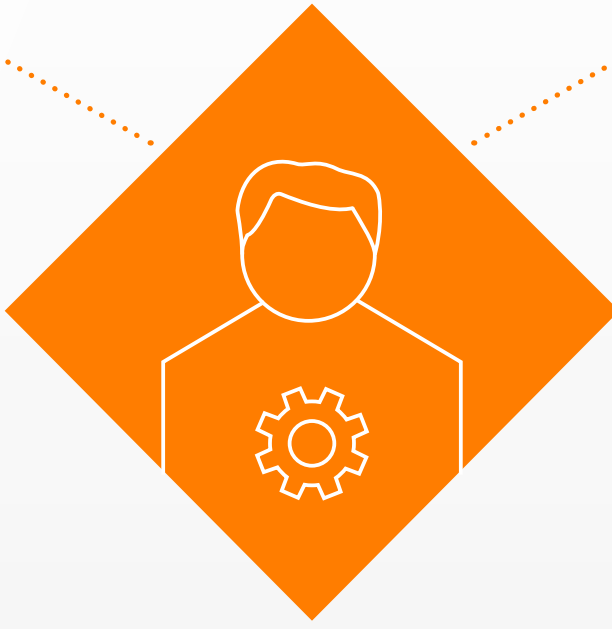
How will I make this data available in my ML environment?

How can I ensure I trust the data for my modeling?

I want to spend less time on data prep and more on data science.

How can I deploy and operationalize my ML models into production?

**Raj**  
The Data Engineer



## Data Engineer to the Rescue

Raj helps get the right data to Megan and Logan. Data engineers help you find the right data, make it available in your environment, make sure you can trust the data and that sensitive data is masked, ensure you spend less time on data preparation, and help you operationalize your data pipelines.

## 7 Critical Capabilities of Data Engineering

Take a platform and AI-driven approach for end-to-end data engineering instead of stitching together piecemeal solutions.



Discover the right dataset with an intelligent data catalog



Bring the right data into your data lake or ML environment with mass ingestion



Operationalize your data pipelines with enterprise-class data integration



Process real-time data at scale with AI-powered stream processing



Ensure trusted data is available for insights with intelligent data quality at scale



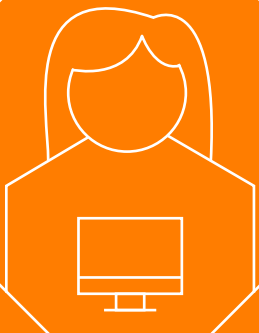
Desensitize confidential information with intelligent data masking



Simplify data prep and enable collaboration with enterprise-class data preparation

## Problem Solved

**Megan**



“Now I have trusted data to drive my business insights.”  
**Megan, Data Analyst**

**Logan**



“Now I have good clean data to run my ML models.”  
**Logan, Data Scientist**

## Data Engineering Facts

Data engineering is growing rapidly as a profession. From large public cloud companies—such as Microsoft and Amazon—to innovators like Databricks, there's high demand for data engineers.

**> 135,000**

job listings for "data engineer" in the U.S.

Source: LinkedIn

**4:1**

the number of data engineering job listings as opposed to those for data scientists

Source: Datanami

**96%**

year-over-year change in demand

Source: Datanami



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