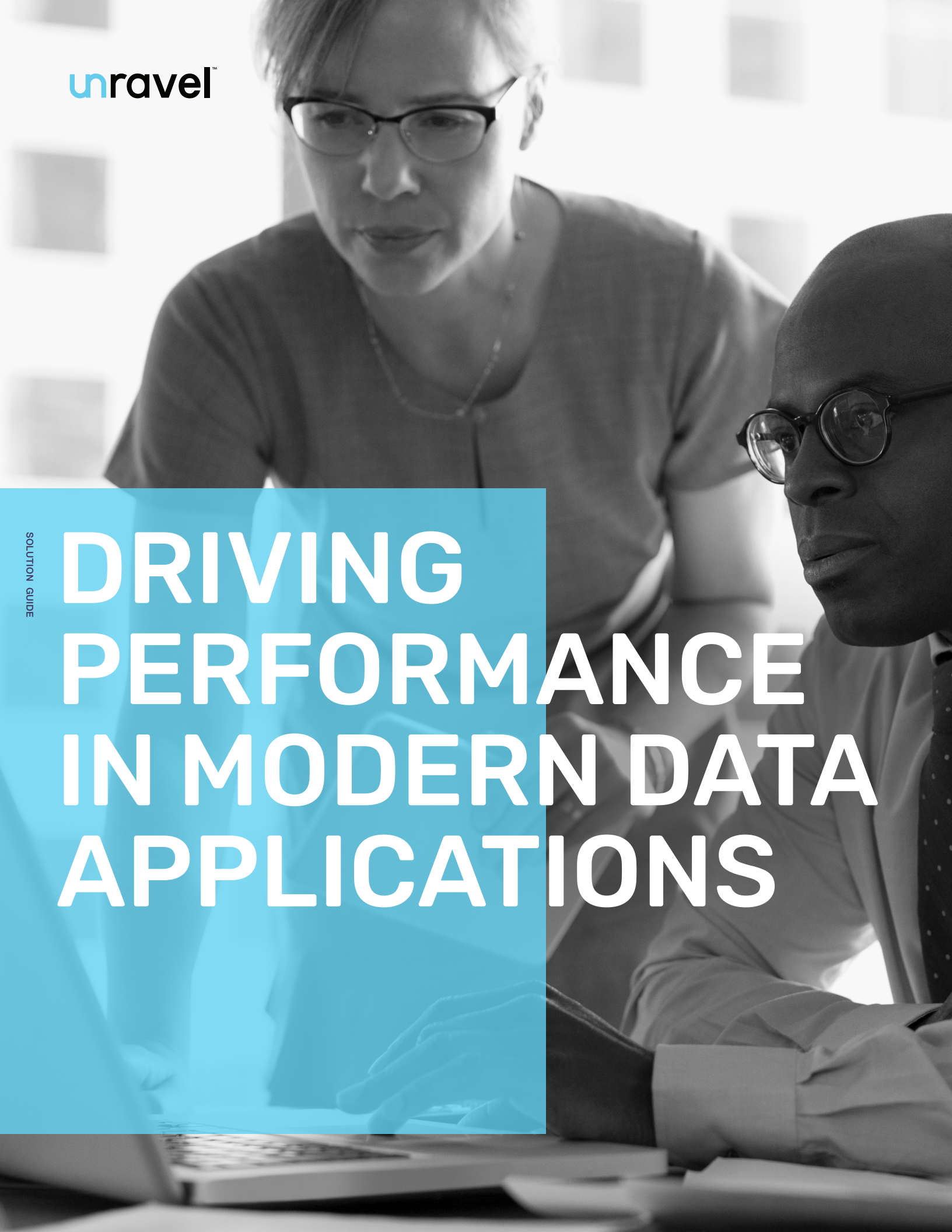
unravel



SOLUTION GUIDE

# DRIVING PERFORMANCE IN MODERN DATA APPLICATIONS

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# GETTING OPTIMAL PERFORMANCE FROM YOUR DATA APPLICATIONS IS BOTH CHALLENGING AND EXPENSIVE.

Today, teams across the enterprise are building and managing large-scale, data-driven applications to drive value for their business – including IT operations, app developers, data scientists, and data engineers.

Ensuring the consistent performance of these business-critical applications has never been more crucial – and never more complex.

The challenge is that all of these apps – and all of these teams – are working in a complex ecosystem where performance can be affected by issues on both the application side and the operations side.

On the app side, an application could be failing, underperforming, or hogging cluster resources. Or it could be a rogue app causing other applications to slow down or fail.

On the ops side, it can be difficult to get visibility into performance – where workloads are being executed, how resources are being used or constrained, how services are being used – and to identify and resolve issues across a large, complex stack.

The result is often a lot of finger-pointing between teams: "Why is my app slow?" "You wrote bad code." "No, it's the cluster."

Truly understanding application performance – and the underlying issues affecting that performance – is complicated.

"My application is slow" could be the result of bad code, or mismatched file formats, or suboptimal configuration settings, or the job scheduler stealing resources for a different app, or a hundred other things.

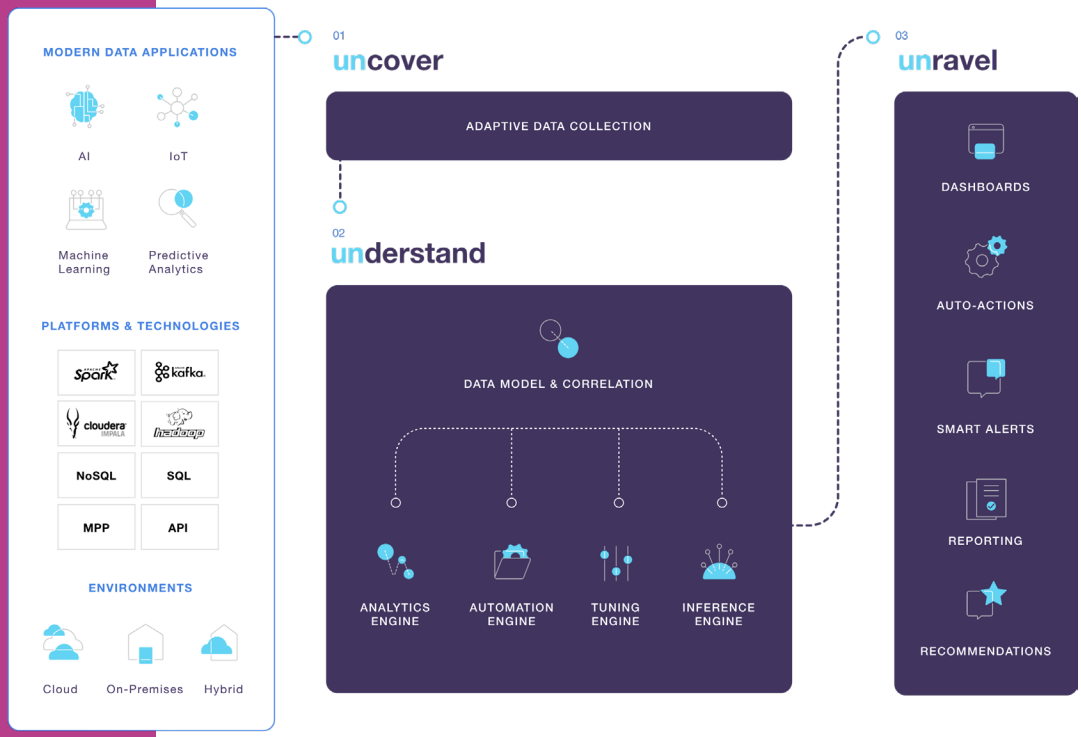
With all these possible permutations, locating and addressing the actual root cause of performance issues can be overwhelming.

That's where Unravel can help.

# The Unravel Solution

The Unravel Data Operations Platform helps ops engineers, app developers, and enterprise architects reduce the complexity of delivering reliable application performance.

Providing full-stack visibility, deep operational intelligence, and AI-powered recommendations and automation, Unravel helps teams find and fix the root cause of issues across your ecosystem, so you can improve and optimize performance.



# How does Unravel work?

Unravel collects data from across your apps and pipelines to build a complete model of your ecosystem, then uses AI, machine learning, and predictive analytics to help you monitor performance – and take action to improve it.

**uncover**

Unravel uncovers operational metadata from across the big data stack, cloud infrastructure, and running Spark and MapReduce jobs to provide complete visibility into data operations.

**understand**

Unravel analyzes and correlates all of this metadata to model your pipelines from end to end, providing the full context you need to understand and manage performance.

**unravel**

Unravel goes beyond systems monitoring to offer AI-driven recommendations for improved cluster performance and stability, as well as autonomous remediation of failures and auto-tuning of data applications.

With Unravel, every member of your team is a big data expert, empowered by AI to improve the performance of your applications.

# What makes Unravel different?

Today's large-scale, data-driven applications require a unique approach to understanding and optimizing performance. Only Unravel provides:

## Full-stack coverage

Unravel works across your entire ecosystem to demystify and simplify operations.

- Get 360° visibility into apps, systems, services, users, infrastructure, and more.
- Gain clarity into code, configurations, containers, resource constraints, and dependencies.
- Unravel's agentless design and lightweight micro-sensors put minimal load on clusters.

## AI-driven recommendations

Unravel does more than monitor – it shows you how to make things better.

- Uncover the root cause of issues and specific recommendations for enhancing performance.
- Map dependencies among applications, services, resources, and users.
- Optimize cloud platform instances by forecasting application needs.

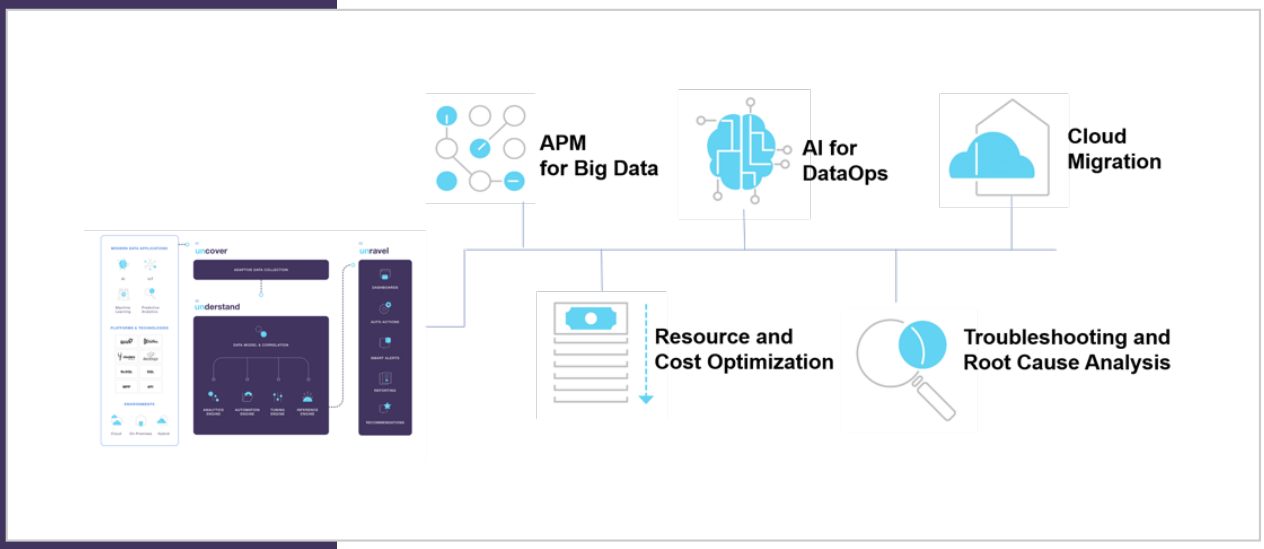
## Automated tuning and remediation

Unravel operationalizes big data by automating it.

- Leverage Auto-Actions to automatically improve performance, resource usage, and reliability.
- Automatically detect and correct performance bottlenecks and failures.
- Autonomously find and eliminate rogue or resource-wasting applications and users.

# How can Unravel help?

Unravel provides the insight, intelligence, and guidance to address a number of use cases across your business.




## APM for Big Data

The size and complexity of the big data ecosystem makes it challenging to manage application performance. Unravel sets a new standard for big data APM, helping you not only monitor performance, but optimize it – for applications that are faster, more reliable, and cheaper to run.

## AI for DataOps

Today's data is too complex to manage manually. Unravel uses AI, machine learning, and predictive analytics to automatically monitor, diagnose, and troubleshoot problems. Get straightforward answers. Quickly resolve issues. Improve the productivity of your team.

## Cloud Migration

Get the most out of your cloud investment – Unravel can help you perfectly plan and execute the migration of your apps to the cloud, helping you reduce friction, maximize performance, and minimize resource usage costs.

## Resource and Cost Optimization

Inefficient clusters can cost your business big. Unravel reveals exactly how apps are consuming cluster resources, providing the insight you need to allocate and use resources the right way. If, for example, you typically run 100 apps in a day, Unravel can tune your environment to run 200 – with the same performance and stability – and a 50% reduction in costs.

## Troubleshooting and Root Cause Analysis

Complicated apps and pipelines make it hard for teams to find the right solutions. Unravel helps you quickly uncover what's causing bottlenecks and issues – from code to infrastructure – so you can quickly resolve them. We can even find and fix these problems automatically.

# UNRAVEL MAKES DATA WORK.

With all the apps, systems, and teams working in the modern data ecosystem, it can be difficult to understand what's affecting performance – and how to improve things.

Unravel sheds new light on your apps and environment, providing every team with the visibility, the intelligence, and the guidance to drive better performance – and better results – in the applications that power your business.

## Greater Productivity

98% reduction in troubleshooting time.

## Guaranteed Reliability

100% of apps delivered on time.

## Lower Costs

60% reduction in costs.

# UNRAVEL SUPPORTS THE TECHNOLOGIES YOU RELY ON MOST.

## Supported Cloud Environments

A full-featured trial version of Unravel is available as on both Amazon and Azure clouds.

## Unravel for Amazon AWS and EMR

Unravel is available on Amazon AWS and Amazon EMR, supporting a variety of cloud services.

## Unravel for Microsoft Azure

A Microsoft Co-Sell Partner, Unravel is available in the Azure Marketplace and supports multiple cloud services.

# Big Data Ecosystem

## SYSTEMS AND ENGINES

## WORKFLOW SCHEDULERS

## PLATFORMS

# Environment

## MICROSERVICES

## INFRASTRUCTURE ENVIRONMENTS

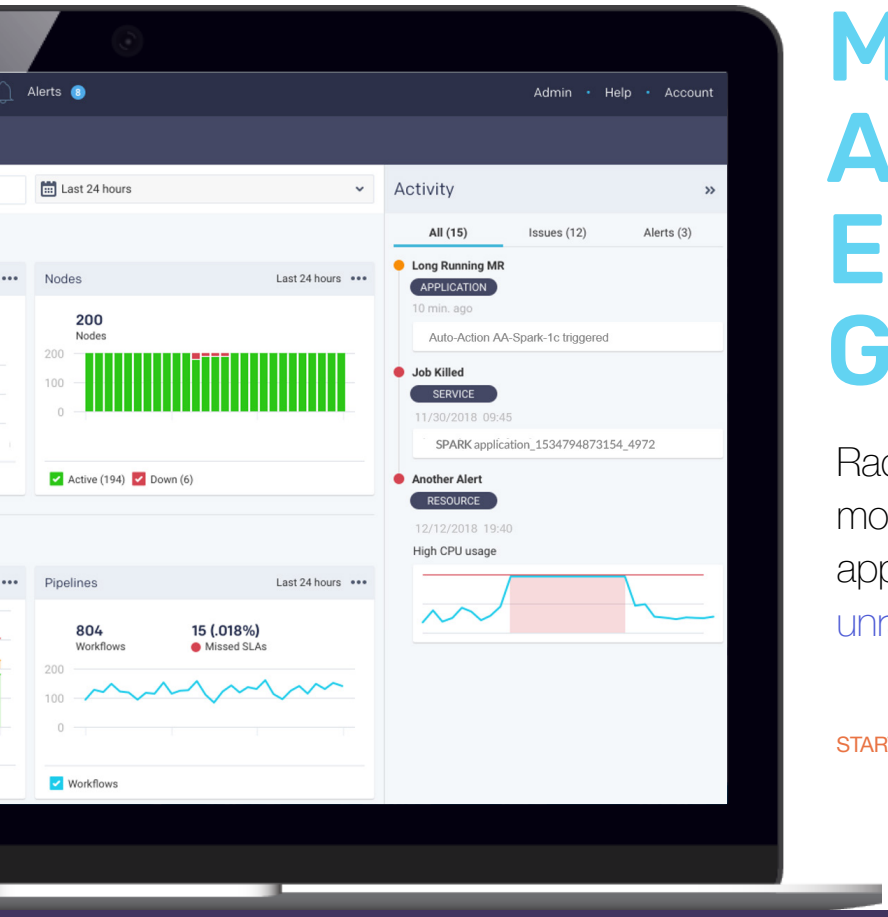
## SECURITY AND ACCESS CONTROL

# Other Tools

## MONITORING

## COLLABORATION

GET STARTED




# READY TO MAKE YOUR MODERN DATA APPLICATIONS ENTERPRISE GRADE?

Radically simplify the way you troubleshoot, monitor, and optimize your data-driven applications – try Unravel for free at unraveldata.com.

START YOUR FREE TRIAL →

## About Unravel

Unravel radically simplifies the way businesses understand and optimize the performance of their modern data applications – and the complex pipelines that power those applications. Providing a unified view across the entire stack, Unravel's AI-powered data operations platform leverages AI, machine learning, and advanced analytics to offer actionable recommendations and automation for tuning, troubleshooting, and improving performance – both today and tomorrow.

By operationalizing how you do data, Unravel's solutions support modern big data leaders, including Kaiser Permanente, TIAA, Adobe, Deutsche Bank, Wayfair, and Neustar. The company is headquartered in Palo Alto, California, and is backed by Menlo Ventures, GGV Capital, M12, Data Elite Ventures, and Jyoti Bansal. To learn more, visit unraveldata.com.

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