

# Don't Fall Behind in the Data Game

Improve decision intelligence by optimizing your analytics and artificial intelligence (AI) data pipelines



WARNING

<b>Start</b>	➔	<b>87%</b> of organizations have low business intelligence and analytics maturity <sup>1</sup>	<b>68%</b> of enterprise data goes unused <sup>2</sup>	<b>85%</b> of AI projects will deliver erroneous outcomes <sup>3</sup>	<b>45%</b> of IT leaders say that data quality is the biggest detractor from ROI in data governance <sup>4</sup>
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## Customers seek improvements in:

- Customer experiences
- Decision intelligence
- Data governance

## But challenges exist:

- Skilled staff with data literacy
- Legacy infrastructure and processes
- Data quality

"To deliver maximum functionality, performance, security, and compliance—and minimize ongoing maintenance—Itaú Unibanco upgraded its data infrastructure with Intel® Xeon® Scalable processors. With powerful Intel® processors in place, Itaú Unibanco has reduced processing times by 20 percent. From initial deployment, Itaú Unibanco has seen faster application processing, along with minimal downtime."  
—Banco Itaú representative<sup>5</sup>

## Optimize to advance your organization's data literacy and security.

A recent petabyte benchmark test by Amazon Web Services (AWS) and Intel shows how enterprises can use the Aerospike distributed NoSQL database management system (DBMS), in combination with key innovations in Intel Xeon Scalable processors and Intel® Optane™ technologies, to save millions of dollars per cloud application. With this solution, enterprises can power their real-time applications with predictable, sub-millisecond performance up to petabyte scale.<sup>6</sup>



**Ingest phase:**  
A large automaker was able to ingest 1 PB per day of critical research and development (R&D) data.<sup>7</sup>

**Prepare phase:**  
SK Telecom's optimized Intel-based data pipeline outperforms its legacy solution by up to 4x.<sup>8</sup>

**Store phase:**  
3rd Gen Intel Xeon Scalable processors outperform Amazon Web Services (AWS) Graviton2 by up to 1.53x for MongoDB maximum throughput.<sup>9</sup>

**Visualize phase:**  
Complete graph-analytics computations 2x faster on average.<sup>11</sup>

**Analyze phase:**  
Achieve up to 1.87x higher AI inference performance.<sup>10</sup>

## Intel and its large partner ecosystem have your back every step of the way ...

## ... with modern data solutions powered by accelerators built into 3rd Gen Intel Xeon Scalable processors ...

- Intel Software Guard Extensions (Intel SGX)**  
Safeguards system vulnerabilities
- Intel QuickAssist Technology (Intel QAT)**  
Accelerates data compression
- Intel AES New Instructions (Intel AES-NI)**  
Delivers fast encryption
- Intel Advanced Vector Extensions 512 (Intel AVX-512)**  
Accelerates high-performance computing (HPC) and data analytics
- Intel Deep Learning Boost (Intel DL Boost)**  
Accelerates AI workloads

## ... and critical software optimizations to accelerate analytics success.



## Intel technology-powered data pipeline solutions are delivering:

### Finish

- Improved performance and availability
- Security-enabled data platforms
- Data intelligence and simplified deployments



# Win the data-analytics game when you partner with Intel.

Learn more about Intel's flexible, high-performance [analytics and AI solutions.](#)

<sup>1</sup> Gartner, "Gartner Data Shows 87 Percent of Organizations Have Low BI and Analytics Maturity," December 2018. [gartner.com/en/newsroom/press-releases/2018-12-06-gartner-data-shows-87-percent-of-organizations-have-low-bi-and-analytics-maturity](https://www.gartner.com/en/newsroom/press-releases/2018-12-06-gartner-data-shows-87-percent-of-organizations-have-low-bi-and-analytics-maturity).  
<sup>2</sup> Seagate, "Seagate's 'Rethink Data' Report Reveals That 68% Of Data Available To Businesses Goes Unleveraged," July 2020. [seagate.com/news/news-archive/seagates-rethink-data-report-reveals-that-68-percent-of-data-available-to-businesses-goes-unleveraged-pr-master/](https://www.seagate.com/news/news-archive/seagates-rethink-data-report-reveals-that-68-percent-of-data-available-to-businesses-goes-unleveraged-pr-master/).  
<sup>3</sup> Gartner, "Gartner Says Nearly Half of CIOs Are Planning to Deploy Artificial Intelligence," February 2018. [gartner.com/en/newsroom/press-releases/2018-02-13-gartner-says-nearly-half-of-cios-are-planning-to-deploy-artificial-intelligence](https://www.gartner.com/en/newsroom/press-releases/2018-02-13-gartner-says-nearly-half-of-cios-are-planning-to-deploy-artificial-intelligence).  
<sup>4</sup> Enterprise Strategy Group (ESG), "2022 State of Data Governance Empowerment." Sponsored by erwin by Quest. 2022. [erwin.com/analyst-report/2022-state-of-data-governance-and-empowerment-report/](https://www.ersg.com/analyst-report/2022-state-of-data-governance-and-empowerment-report/).  
<sup>5</sup> Microsoft, "Itaú Unibanco boosts service availability and data processing with Microsoft SQL Server 2019 and Intel Xeon Scalable processors." Used with permission from Microsoft. February 2020. [customers.microsoft.com/en-us/story/772594-itaunibanco-banking-and-capital-markets-sql-server-2019](https://customers.microsoft.com/en-us/story/772594-itaunibanco-banking-and-capital-markets-sql-server-2019).  
<sup>6</sup> Intel, "Petabyte Scale in AWS with Aerospike Utilizing Intel Technology," January 2022. [intel.com/content/dam/www/central-libraries/us/en/documents/intel-aerospike-ebook.pdf](https://www.intel.com/content/dam/www/central-libraries/us/en/documents/intel-aerospike-ebook.pdf).  
<sup>7</sup> Real-world customer collected autonomous driving data for analytics using Intel products and technologies.  
<sup>8</sup> Intel, "SK Telecom: AI Pipeline Improves Network Quality," October 2020. [intel.com/content/www/us/en/customer-spotlight/stories/sk-telecom-ai-customer-story.html](https://www.intel.com/content/www/us/en/customer-spotlight/stories/sk-telecom-ai-customer-story.html).  
<sup>9</sup> As measured by Mongo DB max throughput testing on October 2021 of a 3rd Gen Intel Xeon Platinum processor versus an AWS Graviton2 M6g. For full workloads and configuration details, visit [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) (3rd Generation Intel Xeon Scalable processors, 103). Results may vary.  
<sup>10</sup> As measured by ResNet-50 inference throughput testing on May 18, 2020. For full workloads and configuration details, visit [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) (3rd Generation Intel Xeon Scalable processors, 2). Results may vary.  
<sup>11</sup> As measured by Katana graph testing on March 15, 2021. For full workloads and configuration details, visit [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex) (3rd Generation Intel Xeon Scalable processors, 115). Results may vary.