

AI in Healthcare Is Stuck on Data

Not models. Not talent. The real bottleneck is data plumbing.

Swipe for insights →

THE DATA

76%

FDA-Approved Radiology AI Devices

Of the 950 AI/ML-enabled devices authorized by mid-2024, 76% were radiology tools.

This high concentration reveals where AI is most actively deployed in clinical settings. Yet even with such widespread adoption, the real challenge isn't building models—it's accessing and using the data that powers them. The data remains trapped in siloed systems, rendering even the most advanced algorithms ineffective.

Source: Databricks Blog • Published October 21, 2026

<https://www.databricks.com/blog/biomedical-imagings-real-bottleneck-data-not-model>



01

Data is the true frontier

The article reveals that the bottleneck in biomedical imaging AI isn't model performance—it's data. Imaging data is fragmented across PACS, vendor-neutral archives, and clinical systems, making it nearly impossible to query at scale. Even with open datasets like MIMIC-CXR and The Cancer Imaging Archive, reproducibility remains a crisis due to missing code and data. The real frontier isn't better algorithms—it's unified, governed data infrastructure that enables collaboration without compromising privacy.



02

Collaboration is the only path forward

The EXAM study, which trained a federated model across 20 institutions, showed a 16% average gain in AUC and 38% in generalizability over single-site models. This proves that collaborative data use—without moving patient data—is not just feasible but essential. However, such efforts are hampered by data heterogeneity, privacy governance, and the absence of a common substrate. The solution isn't more AI—it's a governed lakehouse architecture that makes imaging data queryable, de-identifiable at scale, and linkable to EHR and omics data.

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Director, ALEX Companies

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george@alex.realestate · +1 713.918.9951



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