



Generative AI in Healthcare & Life Science for today & tomorrow

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PhD in Biology/Biophysics from European Molecular Biology Laboratory (EMBL) in Heidelberg

R&D department lead at Roche Diagnostics International Laboratory Automation Solutions

Delivery Practice Lead at AWS Professional Services Emerging Technology

9+

Years with dedicated healthcare and life sciences practice

15+

Years as world's first, most comprehensive, and broadly adopted cloud platform

17+

Years on average, AWS team leaders have been in the life sciences industry



All top 10

Medical devices organizations globally use AWS

>80%

Of HCLS unicorns are AWS customers

9 of the top 10

Pharmaceutical organizations globally use AWS for generative AI and machine learning

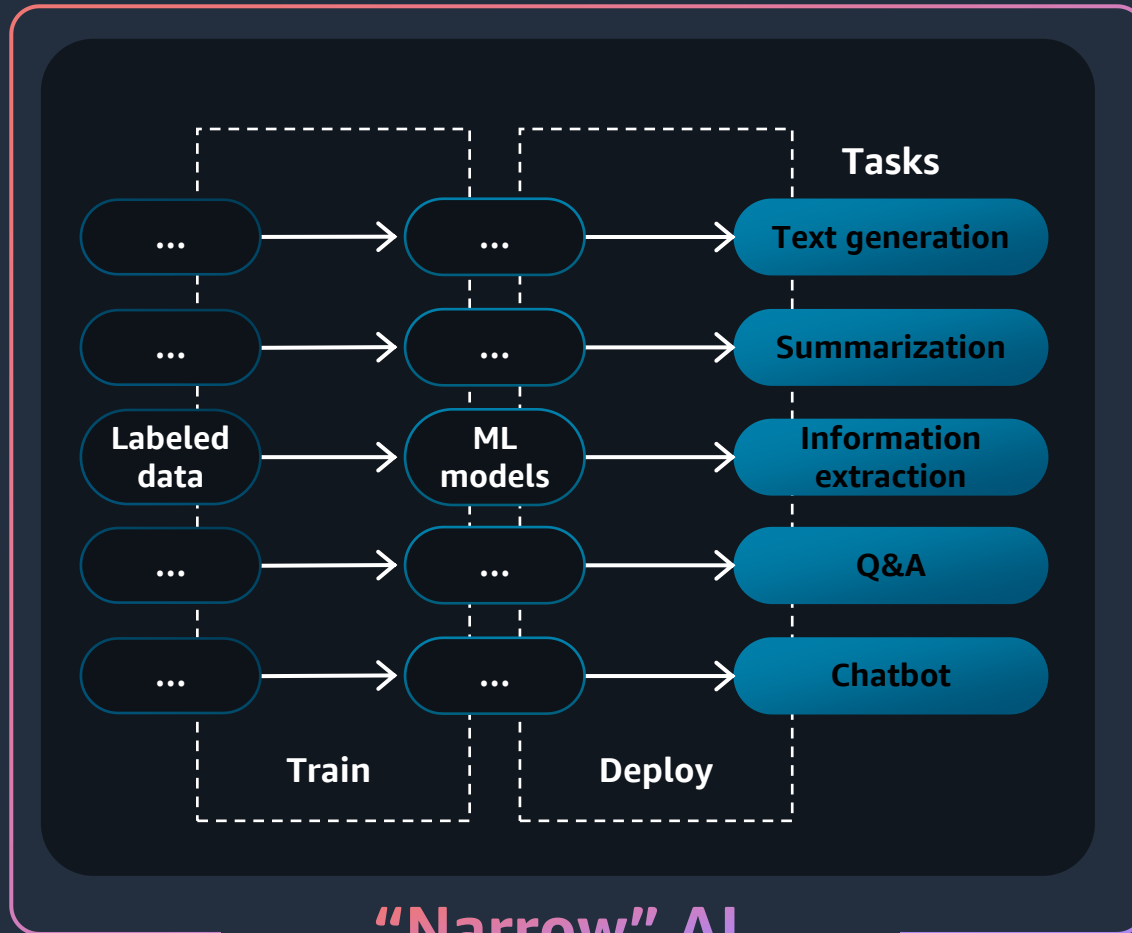


*Top 10 medical devices companies by revenue in 2023, per [Proclinical](#)

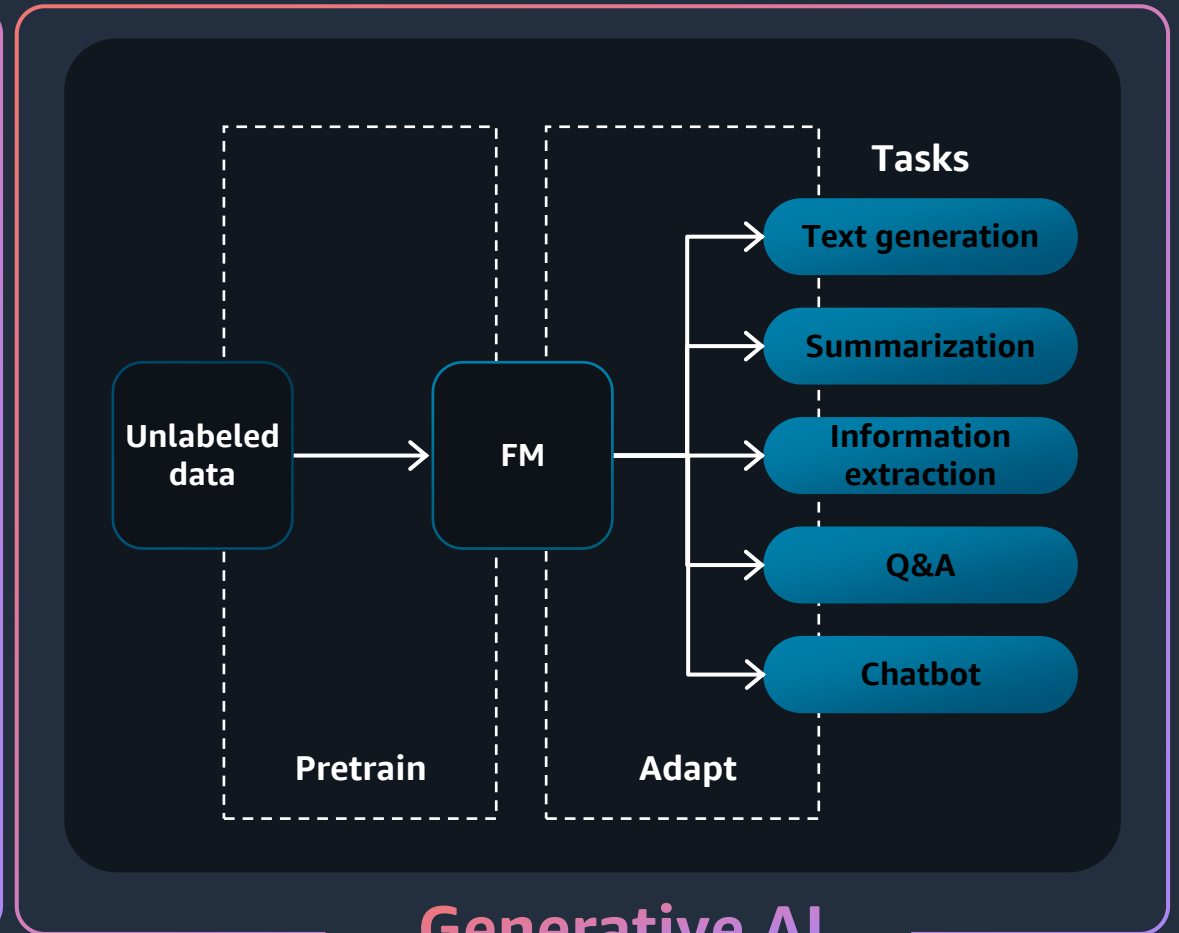
*HCLS unicorns list by valuation in 2024, per [Pitchbooks](#)

*Top 10 pharma companies by revenue in 2023, per [FiercePharma](#)

Why generative AI?



"Narrow" AI



Generative AI

Genomics England develops genomic and health information platform to turn science into healthcare



Extended reading:

<https://aws.amazon.com/solutions/case-studies/genomics-england/>

<https://www.genomicsengland.co.uk/blog/cloud-based-multimodal-machine-learning-at-genomics-England>

<https://aws.amazon.com/blogs/publicsector/how-healthcare-organizations-use-generative-ai-on-aws-to-turn-data-into-better-patient-outcomes/>

<https://www.healthawareness.co.uk/patient-care/genai-is-driving-clinical-efficiencies-and-research-for-improved-patient-outcomes/>

Generating impressions from radiology reports

SMARTREPORTING

- A significant reduction in words spoken or typed during report creation
- Enhanced research and organizational efficiency with structured, machine-readable findings
- 60% higher data quality for clinical decision-making, 150% improved report accuracy
- Improved communication

Details:

<https://www.smart-reporting.com/en/news/smart-reporting-integrates-llm-technology-built-on-aws>

How does AWS help genAI innovation

APPLICATIONS THAT LEVERAGE LLMs AND OTHER FMs



Amazon Q
Business



Amazon Q
Developer



Amazon Q in
QuickSight



Amazon Q in
Connect

TOOLS TO BUILD WITH LLMs AND OTHER FMs



Amazon Bedrock

Guardrails | Agents | Studio | Customization Capabilities | Custom Model Import

INFRASTRUCTURE FOR FM TRAINING AND INFERENCE



GPUs



Trainium



Inferentia



SageMaker



UltraClusters



EFA



EC2 Capacity Blocks



Nitro



Neuron

The differentiator is in your Data The full power is in the reach of the application

Drug Discovery Workbench

<https://www.youtube.com/watch?v=Y8woI9j5uw0>



Thank you!
Now Go Build!

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