

Enabling a Major Pharmaceutical Firm with AI/ML Automation Across Hybrid Cloud Platforms



Introduction

The R&D division of the pharmaceutical company manages multiple AI/ML models that accelerate the drug discovery process. With the increase in these models, there is also an increase in infrastructure and operational costs. This necessitates the right set of tools, platforms, and products to make the end-to-end process more efficient.

Problem statement

Creating solutions that address issues of scale, cost, efficiency, and complexity while providing a smooth user experience:

- Establish robust infrastructure for scalable development and production pipelines, automating processes to efficiently manage a diverse project portfolio.
- Address the limited availability of data scientists by implementing strategies to optimize resource allocation and effectively support project demands.
- Streamline connections between complex data generators and consumers, enabling multi-modal optimizations to enhance operational efficiency.
- Support the integration of AI/ML innovations into business processes seamlessly, empowering end-users with tools tailored to their needs and driving widespread adoption.

Solution

- Highly resilient and scalable Intelligent Automation (IA) pipelines built on the company's compliant, certified platforms.
- Intuitive self-service and configurable low/no-code solutions that meet industry standards with just a few clicks.
- Company-specific and owned adaptor implementations connecting industry-leading technologies and tools.
- Adaptive hybrid solutions that can bring compute to where data resides or take data to compute efficiently.
- AI for AI: SOTA techniques to optimize AI models for training and inference use cases, bringing over 100% efficiency and thus reducing operation costs.

Conclusion

An optimized MLOps platform, designed to enhance cost efficiency across model training, inference, and deployment stages. It incorporates state-of-the-art (SOTA) open-source techniques to achieve these objectives.