AI & data-driven solutions in production with Reasonance ATLAS

Reasonance. Driving digital transformation.

The challenges surrounding AI & Big Data

Applications of artificial intelligence and big data analytics are helping industries to increase revenue while providing a high return on investment. Open-source frameworks and libraries lower the entry barrier for proof of concepts and small-scale applications. Scaling those applications company-wide or successfully integrating them in a product or a service still poses a challenge for most companies, resulting in increased spending for data and software integration, model versioning, API integrations, and software architecture. The long turnaround times, the high cost of a skilled workforce, and relatively high failure rate often render such projects risky or too cost-intensive to start.

Prerequisites, tools, and processes

To operate a production-grade machine learning system, infrastructure is not the only prerequisite. All the blocks that are cross-cutting throughout the entire IT and data landscape, such as logging, monitoring, CI/CD pipelines, APIs for software management, integration, and exposure, are among others a part of the required foundation. Often organizations overlook the costs associated with the development, integration, and management of all the required components. There are at least three role types in a company dealing full time with the aforementioned components and the related processes: data operations (DataOps) engineers, machine learning operations (MLOps) engineers, and development operations (DevOps) engineers, respectively. This complexity and the associated costs are unfortunately inevitable, but they can be managed and reduced.

Managing complexity

The Reasonance ATLAS PaaS (platform as a service) streamlines the development, deployment, and management of machine learning and data-intensive applications, by providing a contained and secure environment. It lowers the risk, cost, and long time-to-value that companies often face when attempting to adopt machine learning into their business. By providing all the required tools in a ready-to-use form, Reasonance ATLAS allows your company to set the focus on building and operating your data and AI applications. Per-click deployments of prepackaged applications and data and machine learning pipelines provide a high degree of automation. Developed for high scalability, the platform is suitable for operationalizing even highly demanding data-intensive applications.

Integrating data, AI & software in ATLAS

Reasonance ATLAS is built on top of Kubernetes, making it modular and easy to scale. It is a feature-rich platform for organizing your data and streamlining your development and deployment cycles, while the microservice-ready backbone of the platform helps with service integrations. Reasonance ATLAS is a low latency system with fault tolerance and integrated security by design.

Using the AI & data pipelines module:

AI and data pipelines allow you to write only your model code and use it for training. Trained models are versioned and can be deployed per click in a development, test, or production environment. The AI & data pipelines module provides a simple way to allow users or systems to send data for processing and retrieving the pipeline results, simplifying integrations.

Monitoring of pipelines and other services:

For mission-critical applications, it is important to know when the application is not healthy or available. If a pipeline or another service fails, then ATLAS will notify you per email and in the user interface while re-deploying the service to ensure continuous operation. Furthermore, ATLAS provides the option to automatically make redundant deployments to guarantee the desired system availability.

Managing and organizing datasets:

To put your data assets to good use, you need to manage it as any other asset. For that reason, ATLAS is equipped, with a dataset management module, which allows you to define your datasets, upload data, read it, assign user permissions, and much more while being fully integrated with the AI and data pipelines.

The ATLAS software store:

A state-of-the-art microservice architecture allows us to pre-package containerized applications in the ATLAS store and to deploy them with a single click. Currently, applications packaged in the store include among others PostgreSQL, Apache Cassandra, and Jupyter Lab. Additional user-defined packages can be prepared to allow streamlined distribution of custom software across different locations or customers.

If you are interested in deploying Reasonance ATLAS in the cloud or on-premise, get in touch with us!