

Accelerate Innovation with TIBCO Data Science

Collaborate, operationalize, and scale machine learning across your organization

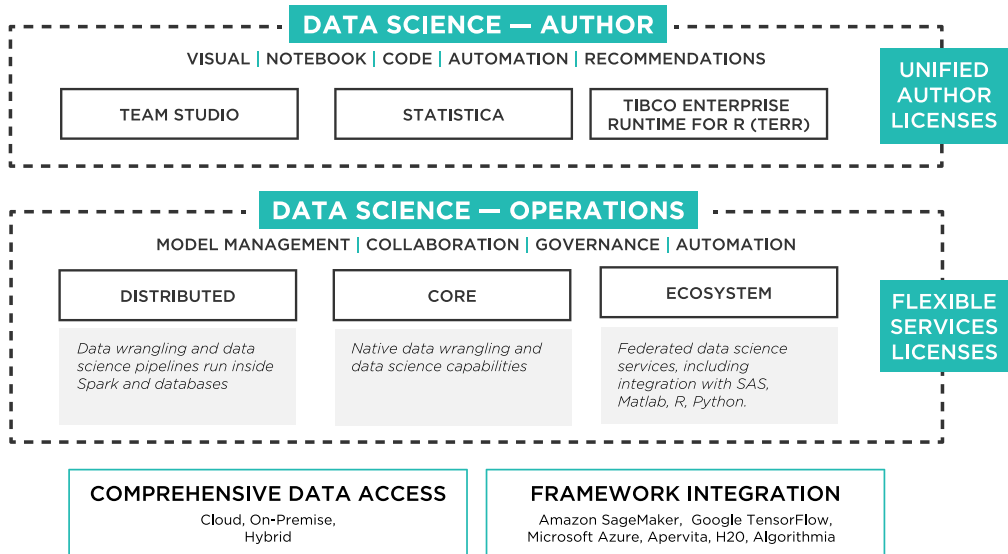
BENEFITS

- Support the end-to-end machine learning lifecycle, from data ingest and prep, to model build and selection, to model deployment, monitoring, and governance.
- Simplify data science by automating many of the more routine steps involved with data science projects, from data prep, to AutoML, to automatic code generation for model deployment.
- Empower everyone to collaborate, not just a few data scientists, by allowing the entire cross-functional team (including citizen data scientists, data engineers, business experts, and developers) to leverage their creativity. Use an intuitive web-browser interface or comprehensive desktop client that makes it easy to share, comment, and markup while maintaining transparency, security, version control, and auditability.
- Operationalize data science by easily deploying analytics into production environments. When data drifts and models decay, continue to understand and act on trustworthy results by retraining, refreshing, and automatically deploying new data science pipelines at the edge or directly within business systems.

Data science is a team sport. Data scientists, citizen data scientists, business users, and developers need flexible and extensible tools that promote collaboration, automation, and reuse of analytic pipelines. But algorithms are only one piece of the advanced analytic puzzle. To deliver predictive insights, companies need to increase focus on the deployment, management, and monitoring of analytic models. Smart businesses rely on platforms that support the end-to-end analytics lifecycle while providing enterprise security and governance. TIBCO® Data Science helps organizations innovate and solve complex problems faster to ensure predictive findings quickly turn into optimal outcomes.

WHAT IS TIBCO® DATA SCIENCE?

TIBCO Data Science is a unified platform that combines the capabilities of TIBCO Statistica™, TIBCO Spotfire® Data Science (formerly Alpine Data), TIBCO Spotfire® Statistics Services, and TIBCO® Enterprise Runtime for R (TERR). TIBCO Data Science allows expanding data science deployments across the organization by providing flexible authoring and deployment capabilities.



A comprehensive set of data science capabilities

DATA DISCOVERY & EXPLORATION

TIBCO Data Science connects to virtually any data source, allowing users to provision sandboxes and build models without needing to involve IT or move their data. The platform allows users to interactively explore, visualize, and prepare data.

BENEFITS

- Reuse data science and extend your power by extending data science through reusable machine learning templates that can be easily shared, deployed, monitored, and controlled in production. Stop reinventing the wheel. Standardize and develop best practices while providing the flexibility and extensibility required for innovation.
- Deliver an open, flexible, and embeddable architecture that uses industry standards to integrate with existing IT systems.

DATA PREPARATION AT HADOOP SCALE

The visual drag-and-drop interface allows business users and data scientists to prepare their data without writing SQL, Scala, R, or Python code. The interfaces contain a comprehensive set of operators for functions like one-hot encoding, filtering, and data health check, which allow the user to construct complex workflows to clean, blend, transform, and prepare their data for modeling.

ADVANCED ANALYTICS AT SCALE

PREDICTIVE ANALYTICS AND MACHINE LEARNING

The platform contains a comprehensive collection of machine learning and data mining algorithms that empower businesses to manipulate, model, and leverage big data for their most challenging opportunities. The code-free interface uses automation and guides users from data exploration and transformation to predictive modeling and evaluation. Easily combine predictive models, business rules, and recommendations into your critical business processes.

FULL SPECTRUM ANALYTICS

Enable your workforce with built-in smarts and thousands of functions and algorithms. Predictive analytics, regression, clustering, forecasting, decision trees, neural networks, machine learning, data mining, multivariate statistics, statistical process control (SPC), design of experiments (DOE), graph/network analysis, and text analytics that are easily accessed via built-in nodes.

IN-CLUSTER PROCESSING & PARALLEL COMPUTING

TIBCO Data Science algorithms are optimized to push computations into any analytical source. When users execute data prep and machine learning pipelines, the system's distributed execution engine can send computations to Apache™ Hadoop®, Apache Spark™, or databases. This capability allows analysts and scientists to run algorithms at scale without moving the data or optimizing algorithms based on database logic.

ORCHESTRATE OPEN SOURCE

TIBCO Data Science provides a flexible and extensible environment for advanced analytics. The platform is tightly integrated with Jupyter Notebooks and has comprehensive support for programming languages like R and Python. Additionally, users can create a single workflow that integrates Amazon SageMaker, Microsoft Azure, Google TensorFlow, Algorithmia, Azure ML, Apervita, and H2O.

EDGE SCORING FOR IOT ANALYTICS

Automatically create model scoring code appropriate to target the deployment environment for any edge device or gateway. Address almost any IoT analytics use case by running analytic workflows directly at the edge of the network where data is created. Eliminate the need to stream all IoT data to a central server, and take immediate action on the edge.

STREAMING ANALYTICS

Embed real-time insights for frontline workers. Integrate predictive models, text analytics, and business rules into business processes and line-of-business applications.

REUSABLE WORKFLOW TEMPLATES

Improve collaboration across your business with an intuitive interface, examples, and reusable data prep and analytic workflow templates.

EMBED INSIGHTS INTO THE BUSINESS**MANAGE ANALYTICS PROJECTS**

Users can create development sandboxes, or workspaces, that can be shared with any key stakeholder. Each resource involved in the project can be attached to the workspace including workflows, data definition documents, and project plans. Workflow history provides a chronological summary of each version of a workflow within any given workspace, allowing users to revert to an earlier model version.

PROMOTE CROSS-TEAM COLLABORATION

Provide a comprehensive platform for data scientists, citizen data scientists, business users, and developers who need flexible and extensible tools that promote collaboration, automation, and reuse of analytic pipelines. Allow them to interact with their data and provide comments on the status of each project. For the first time, business users can see the real-time status along the entire journey of an analytics project, without needing to use multiple tools or rely on various teams to deliver status reports.

OPERATIONALIZE DATA SCIENCE

Users are able to easily create models that can be quickly deployed to production environments via a variety of languages including PMML, C, C++, Visual Basic, SAS, Java, or C+ stored procedures without the need for recoding. Thousands of models can be monitored, refreshed, and governed to facilitate transparency and auditability within the process.

SECURITY AND GOVERNANCE

Satisfy the most stringent of regulatory controls and audits using version control, approvals, electronic signatures, and rollback capability. Ensure compliance with regulations like FDA 21 CFR Part 11, GxP, SOX, and GDPR.



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