

SAS® Viya® on the Microsoft Azure Marketplace

Bring DataOps, Analytics and ModelOps teams together on the most flexible version of the SAS® Viya® platform yet

Get the most out of your budget with a convenient, pay-as-you-go pricing model.

Overview

Organizations face increasing demands for flexible, high-powered analytics that produce trustworthy results fast. Whether it's providing data science teams with advanced machine-learning capabilities or delivering mobile applications that give decision makers real-time answers, several things are critical to meeting enterprise analytical needs:

- Fast processing for data manipulation, exploration, advanced analytics and artificial intelligence (AI).
- A comprehensive suite of tools for managing structured and unstructured data from any source.
- Analytical assets that can be easily managed, maintained and governed.
- Access to the entire analytics life cycle - including DataOps, AI and ModelOps processes - with options for all users.
- Orchestration of all analytics activities to help ensure tangible results.

On a single cloud-native platform, SAS Viya combines robust data management, powerful machine learning and streamlined model deployment. The result is quick, accurate and reliable analytical insights. SAS Viya provides:

- Powerful analytics that can be deployed at the click of a button for agile development.
- AI-powered automation that increases productivity, so organizations can get from data to production fast.
- Tools and guidance to enable responsible data governance, model building and model management processes, including built-in model interpretability and bias monitoring.
- A visual interface that supports drag-and-drop modeling and programming in SAS and open-source languages, like Python, R, Java and Lua.

Benefits

SAS Viya helps your organization conquer all kinds of analytical challenges. You can:

- Empower your organization to rapidly collaborate on innovative analytics with a platform that accommodates a wide range of skill levels and techniques.
- Use next-generation analytics to solve any business problem and rapidly deploy results for maximum return on investment.
- Gain efficiencies from a seamless, governed environment that accelerates the analytics life cycle.

SAS Viya serves everyone in your organization - from data scientists and business analysts to machine-learning engineers. It also provides reliable, secure analytics inventory management and governance.

Your organization will be able to handle the always-changing and ever-growing range of analytical demands, thanks to powerful SAS analytics running on the cloud provider of your choice.

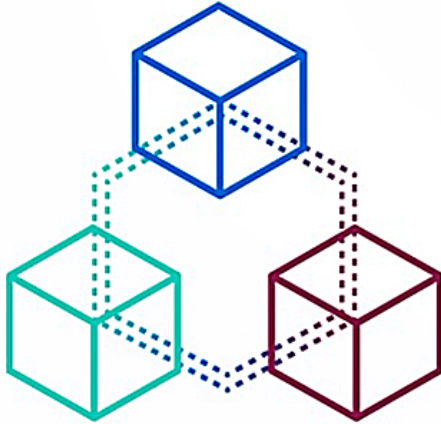
Empower all teams to drive new insights

Analytical professionals often spend too much time explaining business context or finding a common ground for communicating about data and insights.

In SAS Viya, multiple users can explore and analyze the same data concurrently, with options to suit all skill sets. SAS Viya promotes interactive collaboration during the data discovery and model-building processes by providing a shared space where all types of users work together. Users can program in their preferred coding languages (whether SAS or open source) and compare all models to find the best performer.

All analytical tasks are united in a common base from a single, centrally managed, web-based environment. There's no need to use different tools to manage data access, preparation, interactive exploration, statistics, forecasting, optimization, machine learning, artificial intelligence and other advanced model development and deployment activities. Combining all these approaches and capabilities on one platform means greater productivity for everyone.

Hi Jessie Doe,
Welcome to SAS Viya!



Learn more...
▶ **Analytics Lifecycle**

SAS STUDIO
Develop Code
View sample SAS code
View sample Jupyter notebook

MODEL STUDIO
Build Models
View a sample model pipeline

SAS STUDIO
Prepare Data
Learn how to load your data

SAS VISUAL ANALYTICS
Explore and Visualize
Learn how to create a report

SAS MODEL MANAGER
Manage Models
Learn how to manage models
Learn how to import Python models

Extensive in-app learning resources, plus access to expert support through SAS Communities, enable users of all roles and skill levels to participate in advanced analytics.

Challenges

- **Computational issues with big data.** Data continues to grow, and problems get more complex each day. You need a way to prepare and analyze diverse data, improve performance and get fast answers to any analytical question.
- **Pressure to deliver results with limited budgets and talent.** Organizations with unlimited budgets for technologies just don't exist. Businesses must be able to access the analytics they need, while managing their cloud expenditures and making the most of their limited resources.
- **Ever-changing everything.** With constantly evolving business requirements and an onslaught of emerging technologies - how do you determine the best long-term solution that can adjust to your changing needs?
- **Lack of analytical governance.** Open-source technologies are dispersed, need customized support and often aren't integrated. This lack of control over data and analytics heightens risks associated with maintenance, hidden costs, governance and compliance.
- **Difficulty managing portfolios of diverse technologies.** Multiple tools are used for managing data and applications across organizations. As a result, it's hard to trace data lineage and know what version of a model is in use, whether it reflects current deployments and if it's being refreshed as needed.
- **Suboptimal technologies impede decision making.** Slow tools and technology silos make it impossible to consistently discover insights and move from innovation to operations in a timely manner.

Get analytics out of the lab and into production

SAS Viya empowers your organization with flexible options and data-driven confidence - all in a consistent, managed environment that is designed to address analytics challenges.

Analytical teams can use data simultaneously from visual, coding or REST interfaces - the choice is theirs. Discovering answers faster with their preferred methods reduces learning curves and accelerates results.

Score code is automatically generated from the interface or directly from programs built by coders. Then, with just a couple of clicks, you can deploy analytical models to produce tangible results. And because code doesn't have to be redefined for different deployments or data volumes, analytical assets are portable. You can spend more time solving the next question - instead of rewriting code.

Get all the power you need while minimizing complexity

With SAS Viya, you can integrate all elements needed to build and deploy analytics - whether they are defined in SAS, written with other programming languages or called from public REST APIs.

Access the power of SAS from one cohesive place with a traceable inventory of all analytical assets. Monitor the degradation of models in production and solve synchronization issues arising from different code bases. Spend less time worrying about version discrepancies and more time innovating.

Capabilities

Data access, preparation and quality

Access, prepare and govern data from any source, including major cloud data platforms, relational and non-relational data sources, data lakes, data warehouses, social media or any external database of choice. Accelerate data preparation using prebuilt transformations and data cleansing functions that assist data scientists and business users in the exploration, refinement and transformation of data for analytical readiness. Plus, machine learning and AI capabilities scan data and make intelligent transformation suggestions at the click of a button - no advanced or complex coding required. With best-in-class tools for identification of private and sensitive information, SAS Viya makes it easy to evaluate the fitness of data while governing and monitoring confidential data.

Visualization and reporting

Go beyond basic BI with dynamic reports and visuals that include augmented analytics to give users clearer insights into complex data patterns and anomalies. SAS Viya offers a large number of analytics APIs to automate data updates, allowing real-time interaction with data. Users can embed machine learning into dashboards through a simple point-and-click interface, all without writing a single line of code. Natural language explanations, outlier analyses, correlations, forecasts, predictions and drivers of responses are all powered by automated machine-learning algorithms. Plus, business analysts and data scientists can build, tune and compare AI models in a visual interface and convert them into advanced machine-learning pipelines at the click of a button.

The SAS® Viya® Difference

- **Cloud-native platform.** Flexibility is at the heart of the SAS architecture. Gain peace of mind with a fully managed analytics environment, so you can focus on what matters most - achieving important business objectives. SAS Viya natively integrates with data and analytics services from Microsoft Azure at every level of the analytics stack - from data ingestion and preparation to building and deploying AI pipelines - all protected with built-in security and management tools.
- **Faster innovation.** Increase the productivity of every team member to get from data to production fast. With AI-driven automation embedded across the entire analytics life cycle, you can rapidly turn data into tangible results. Intelligent automation and fast processing speeds support streamlined data preparation, model creation, and deployment and retraining. Plus, built-in training resources ensure every user is equipped to use analytics effectively.
- **AI for everyone.** Fragmented skills and technologies can limit your analytics program, making it difficult to meet current and future demands. SAS Viya allows all users to approach analytics their own way on a single, collaborative platform. Whether you prefer to drag-and-drop or write code, you can build best-in-class AI models in SAS Viya. SAS helps you solve data and analytics challenges using an extensive suite of proven methods, including open-source languages like Python and R. This approach makes analytics accessible to anyone seeking insights from data, regardless of skill level or preferences.
- **Trusted results.** Your analytics environment needs to perform as designed across the entire life cycle - from DataOps, to Analytics, to ModelOps processes. You can share, reuse and monitor all your analytics assets in SAS, providing a central, auditable path from start to finish. And, with out-of-the-box model explanations, model interpretability plots, and fairness and bias monitoring, you can generate outcomes that are transparent and ethical.

Model building and testing

Tackle the toughest analytical challenges with a comprehensive visual interface that seamlessly toggles from data definition and problem formulation to pipeline creation and modeling results. The choice is yours - build modeling pipelines manually, apply prebuilt templates or leverage AutoML capabilities to quickly generate effective pipelines for any scenario. And you can code in the language of your choice with support for SAS, Python and R for data pre-processing and modeling. SAS Viya includes all the popular traditional and modern modeling techniques, including deep learning, computer vision, optimization, forecasting and econometrics. Plus, model interpretability and fairness and bias reports are included out-of-the-box to support the responsible use of AI.

ModelOps - Model deployment and management

Simplify model governance by storing all models and modeling assets in a centralized location to provide an enterprisewide view of your analytical assets. SAS Viya allows you to compare models side-by-side to quickly determine a champion model, including both your open-source and SAS models. Easily deploy models to batch, real-time API and container locations, with no recoding required, and monitor models over time to ensure they remain accurate and relevant. Replace, retrain or retire models as necessary. Integrated workflow management allows you to build custom processes to automate all phases of the model life cycle while including human oversight and approval.

SAS® Viya® on the Microsoft Azure Marketplace includes the following products:

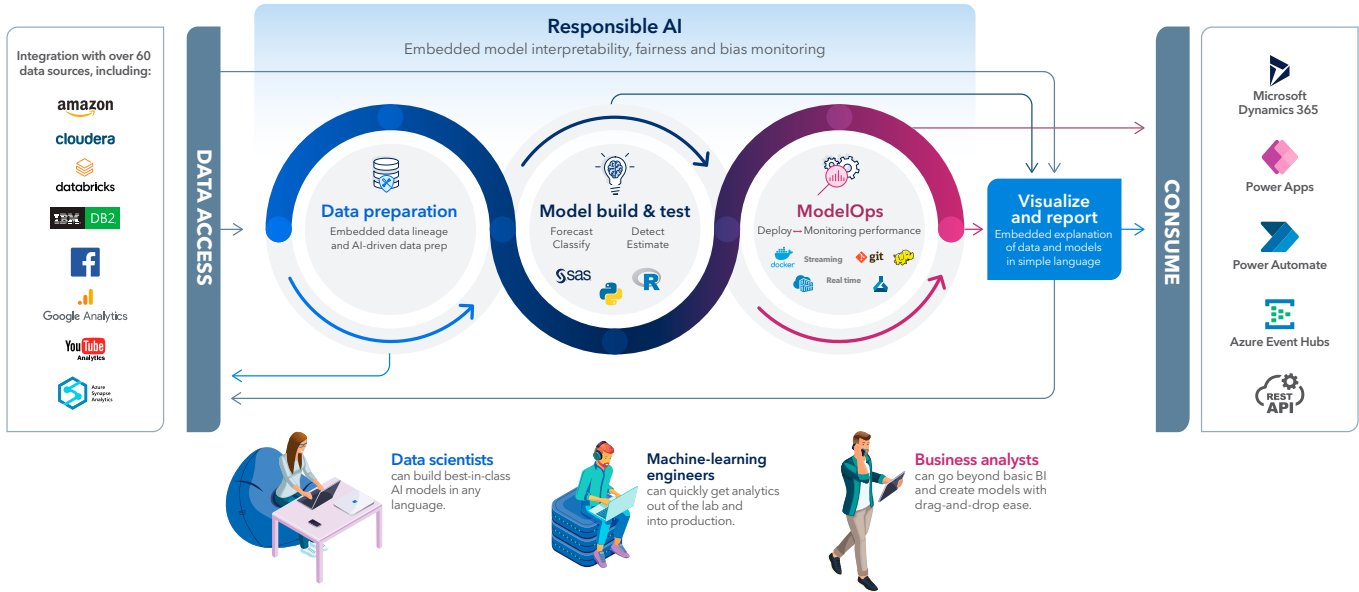
- SAS Visual Analytics
- SAS Data Preparation
- SAS Visual Statistics
- SAS Visual Data Mining and Machine Learning
- SAS Optimization
- SAS Econometrics
- SAS Studio Analyst
- SAS for Microsoft 365
- SAS/ACCESS®
- SAS Information Governance
- SAS/QC®
- SAS/CONNECT®
- SAS Model Manager

You can also apply the processing power of SAS Viya to your existing SAS assets, skill sets and experience. Execute SAS®9 code and models in SAS Viya or bring SAS Viya results into your existing SAS®9 deployments. We've ensured your investment in SAS can continue to meet the analytical challenges of today, while also preparing for the future.

A shared space for data, analytics and ModelOps teams



Robust data prep. Powerful ML. Streamlined deployment. Faster results.



To learn more about SAS Viya, please visit us at sas.com/viya.

