



Evolve Your Analytics Platform

Thanapon Treelertkul
Customer Advisory

“Only 8%

*of companies effectively scale
their analytic initiatives.*”

McKinsey May 2018



SAS is a Leader in
Gartner Data Science and ML Platforms Magic Quadrant
2018

January 2019



● AUTOMATION

● AGILITY

● FLEXIBILITY

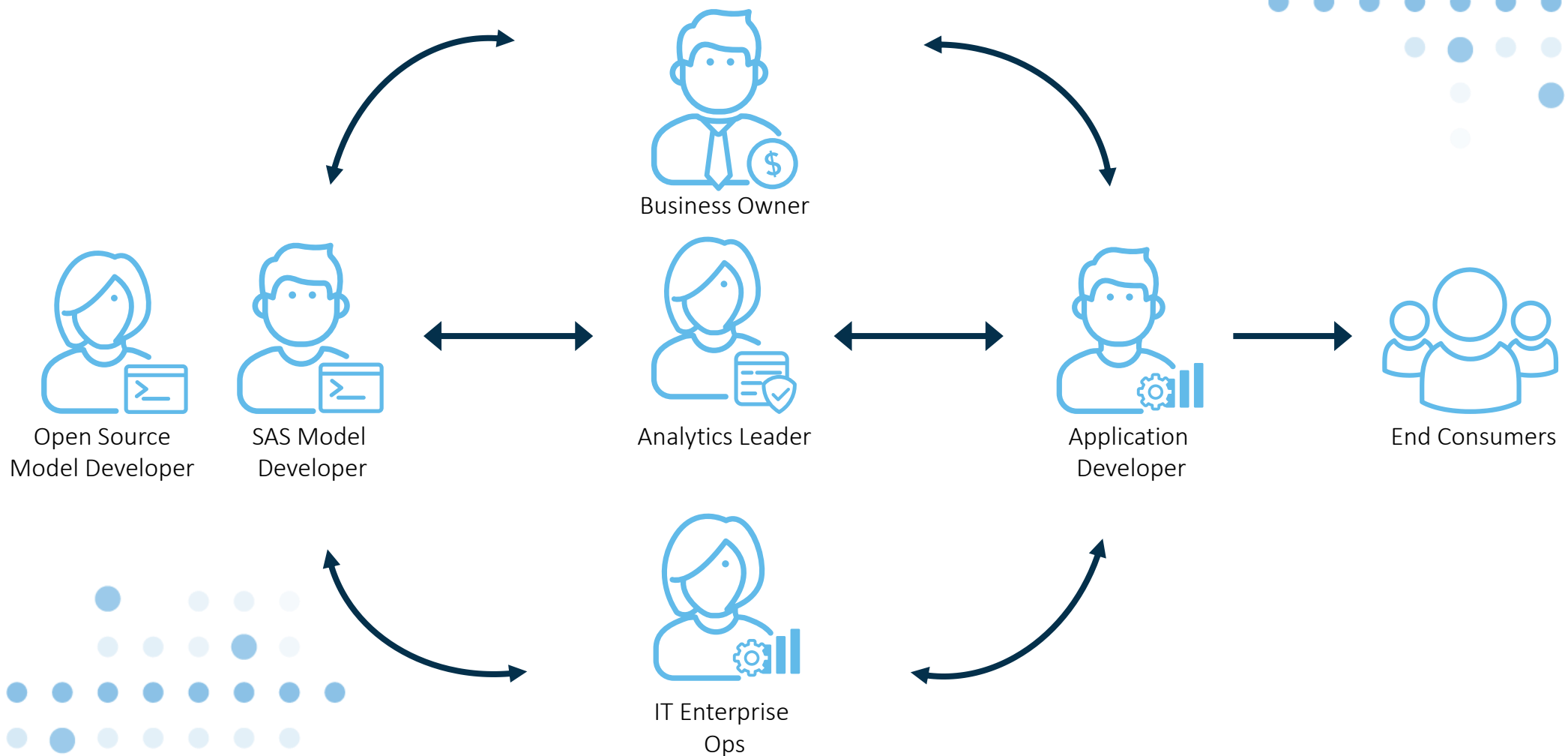
WHY IS IT SO DIFFICULT?

● GOVERNANCE

● SCALABILITY

● DEPLOYMENT

Enterprise Analytics Personas





● AUTOMATION

ORCHESTRATE

● AGILITY

● FLEXIBILITY

● SCALABILITY

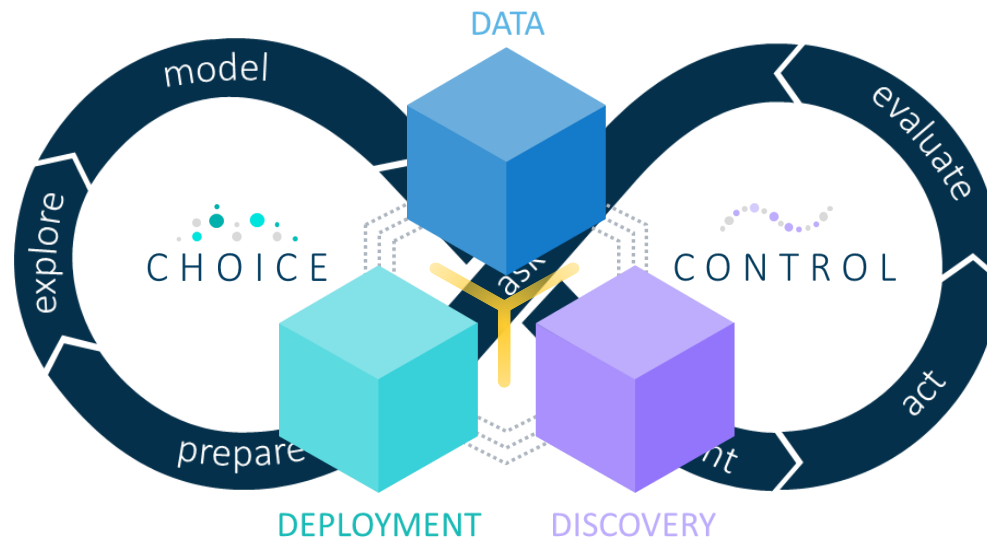
● GOVERNANCE

The Entire Analytics Journey

● DEPLOYMENT

Empowering Enterprise Analytic Initiatives

DATA DRIVEN ANALYTICAL APPROACH



AGNOSTIC MODEL ORCHESTRATION

HOW
Do You Achieve
Value?



CHOICE

CONTROL

PROGRAMMING
LANGUAGES

TALENT

DATA SOURCES

ANALYTIC
TECHNIQUES


CHOICE



CONTROL

SCALABILITY

DATA & MODEL
GOVERNANCE

SECURITY
& PRIVACY

DEPLOYMENT

THE SAS® PLATFORM


CHOICE



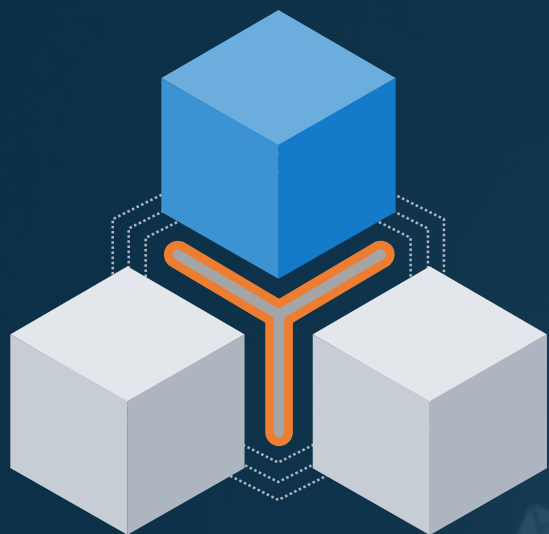

CONTROL

Accelerate your Analytics Journey



ONE PLATFORM

For the full Analytics Life Cycle



DATA



DATA

“What type of data can I use with SAS?”

SAS supports all data types with embedded quality management. Automated data prep suggestions powered by machine learning is coming soon.



All data types
(Structured /Unstructured)



Data lineage and governance



Data Preparation



DISCOVERY



OPEN

“How does SAS work with open source?”

SAS can integrate and orchestrate both open source and SAS algorithms required capabilities to create AI applications.



Open Code Node



REST APIs



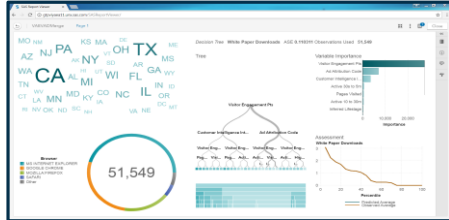
Open Packages



Diversity

Democratize analytics

Drag and Drop UIs



Programming Interfaces



API Interfaces



Business Analyst



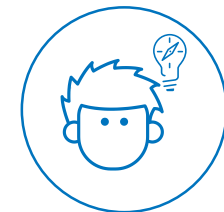
Info Consumer



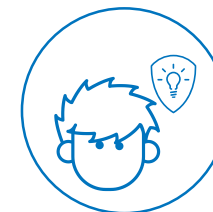
Citizen Data Scientist



Data Scientist



IT



Developer




SAS is Open:

GitHub / SWAT / DLpy / open source models / developer.sas.com / data access / ESP connectors / ...

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SAS Software

Open Source from SAS Software

📍 Cary, North Carolina, USA 🌐 https://www.sas.com/ ✉ github@sas.com Verified

📁 Repositories 105 👤 People 22 📁 Projects 0

✓

Dismiss

Grow your team on GitHub

GitHub is home to over 28 million developers working together. Join them to grow your own development teams, manage permissions, and collaborate on projects.

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[sas_kernel](#)

A Jupyter kernel for SAS. This opens up all the data manipulation and analytics capabilities of your SAS system within a notebook interface. Use the Jupyter Notebook interface to execute SAS code a...

🔴 Jupyter Notebook ★ 126 🍷 48

[sas-viya-programming](#)

Code samples and materials to help you learn to access SAS Viya services by writing programs in Python and other open-source languages

🔴 Jupyter Notebook ★ 70 🍷 72

[sas-prog-for-r-users](#)

Teaching and lab materials for the "SAS Programming for R Users" course, including course notes, data, and code.

🔴 SAS ★ 76 🍷 37

[saspy](#)

A Python interface module to the SAS System. It works with Linux, Windows, and mainframe SAS. It supports the sas_kernel project (a Jupyter Notebook kernel for SAS) or can be used on its own.

🔵 Python ★ 144 🍷 66

[python-swat](#)

The SAS Scripting Wrapper for Analytics Transfer (SWAT) package is the Python client to SAS Cloud Analytic Services (CAS). It allows users to execute CAS actions and process the results all from Py...

🔵 Python ★ 59 🍷 27

[python-dlpy](#)


The SAS Deep Learning Python (DLpy) package provides the high-level Python APIs to deep learning methods in SAS Visual Data Mining and Machine Learning. It allows users to build deep learning model...

🔵 Python ★ 75 🍷 32

→ ↻ 🏠 🔒 https://developer.sas.com/home.html 🔍 ☆ 📄 📁 👤

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Use the power of SAS® Viya® in your applications.


Code libraries and APIs for building apps with SAS

SAS Viya adds to the SAS platform by providing application and enterprise developers, data scientists, and analysts with access to SAS services. SAS Viya allows you to integrate open source languages and agile technology with the capabilities of SAS analytics.


Select a topic below to access documentation, downloads and code samples.




SAS Viya uses PROC CAS to run CAS actions in SAS Cloud Analytic Services.




REST APIs for any client language to access SAS analytics, data and services.




Python APIs for using SAS Viya CAS actions.




R APIs for using SAS Viya CAS actions.




Java APIs for using SAS Viya CAS actions.



Lua APIs for using SAS Viya CAS actions.



iOS and Android SDKs to create mobile apps that access content in SAS Viya.



COMPUTER VISION

“Does SAS support Computer Vision?”

SAS simplifies support of all popular computer vision capabilities vision such as image pre-processing, image classification, object detection for 2D/3D images.



Support ONNX formats



Streaming computer vision
at edge devices



SAS DLPy high-level
deep learning APIs



Thai NLP

“How can I use Natural Language Processing to improve my business?”

SAS makes it easy to interact more naturally with consumers. SAS makes it easier to understand and gain insights from unstructured data. Complex models and their results are explained in plain English.



Traditional Rules
augmented with ML



Conversational AI
(NLU/NLG)



Model Explainability
using NLP

SAS Text Analytics

Easily trained to understand what your users are saying. NLP expertise not needed.

Visually design conversation flow.

Engage customers through targeted automation.

The image displays two screenshots of SAS software interfaces. The top screenshot shows the 'SAS Natural Language Studio' interface for the 'University Edition FAQ Domain'. It features a sidebar with a list of FAQs, including 'What is a vApp?', 'What is a Jupyter Notebook?', and 'What is SASPy'. The main area shows a search for 'What is a vApp?' with a table of results. The bottom screenshot shows the 'SAS Natural Language Studio' interface for the 'University Edition FAQ Bot'. It features a sidebar with a list of FAQs, including 'What is a vApp?', 'What is a Jupyter Notebook?', and 'What is SASPy'. The main area shows a visual flowchart for the chatbot, with nodes for 'Match "SAS Studio General Info"', 'Match "Yes"', 'Web Service', and 'Jump To Questions'. The chatbot interface is shown in the foreground, displaying a conversation with a user named 'Jared Peterson'. The chatbot says: 'Hi, Jared Peterson! I'm the SAS Smart Campus chatbot. What can I help you with today?'. The user asks: 'How much energy was produced in September?'. The chatbot responds: 'I'll look that up. The energy output for September was 329.73 MWh.' The chatbot interface also includes a search bar and a 'Try it now' button.

FORECASTING

“How can we improve our forecasting with SAS?”

SAS automates the forecasting process, providing trustworthy forecasts and prediction intervals (PIs) for even the largest organizations, using the best of ML and traditional time series methods.



Large-scale automatic
forecasting



Combination of ML &
traditional time-series
methods



Better decision making with
PLS in point forecasts



DEPLOYMENT





DEPLOYMENT

“How do operationalize analytics?”

Deployment is the most complex task to generate value from analytics. SAS offers a one-click deployment with the right business decisions directly from the SAS platform for faster, easier time to value.



Deploy anywhere



SAS and Open Source
models

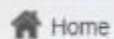


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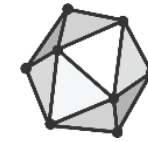
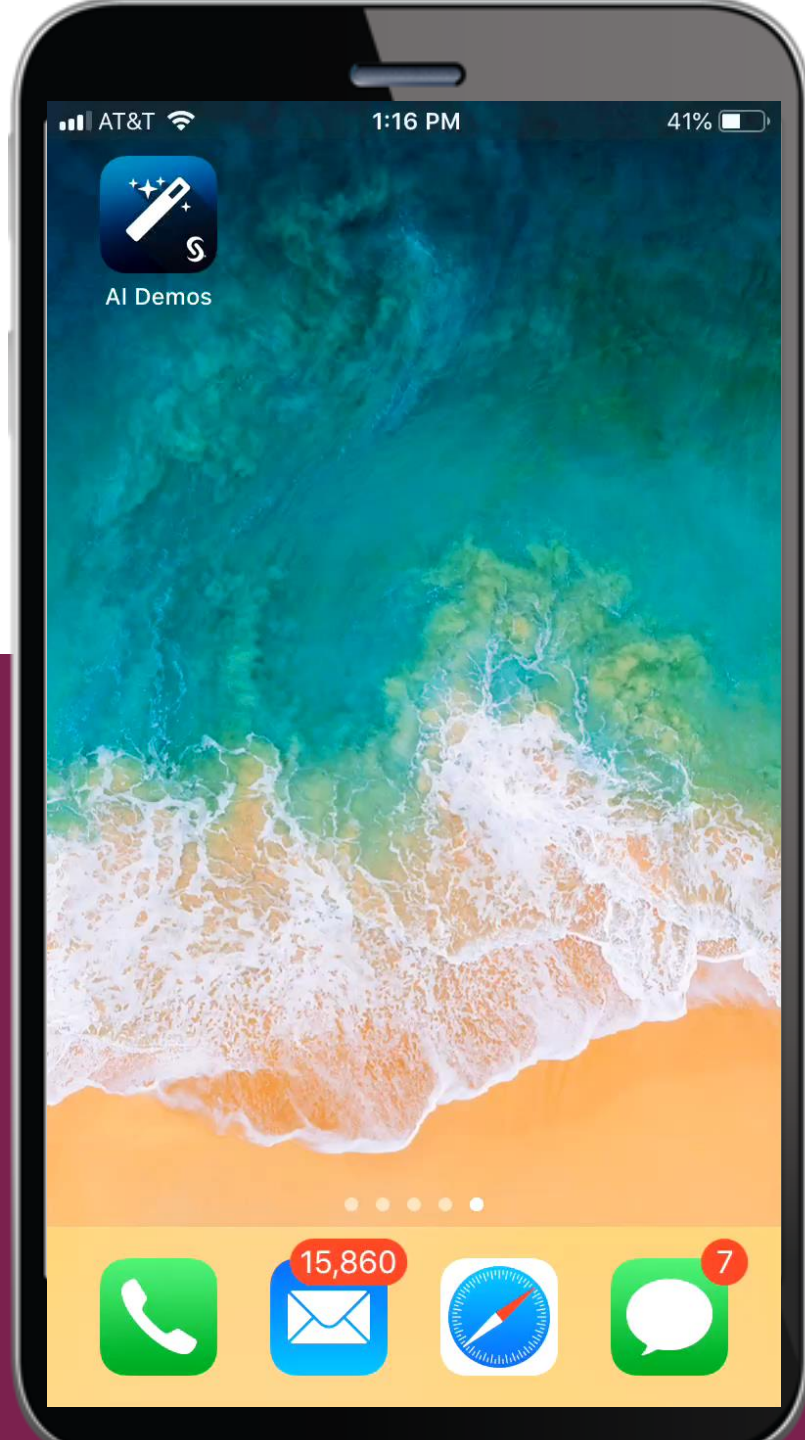
Online services

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**Guaranteed
100% Secure**



ONNX

SAS Model on iPhone



A person stands on a rocky outcrop at night, silhouetted against a bright, glowing light source. They are holding a flashlight that illuminates the sky, revealing the Milky Way galaxy stretching across the dark, star-filled expanse. The foreground shows a dark, hilly landscape with some distant lights. The overall scene conveys a sense of exploration and discovery.

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