

Project Based Learner Series

Getting Started with Data and SAS



Cristina Anton

Global Academic Programs and Certification

Cristina.Anton@sas.com



Who We Are

Global Academic Programs

Meet the Instructors



Cristina
Anton



Rachel
McLawhon



Jackie
Johnson



Tom
Grant

Global Academic Programs

Our Mission: Empowering Analytics for Academics



www.sas.com/academics

We support the next generation by providing **free software and resources** for academia.

Our “customers” are students, educators, independent learners, and academic researchers.

Resources for Teaching and Learning



SOFTWARE

- SAS® Viya® for Learners
- SAS® OnDemand for Academics
- SAS® Viya® Workbench for Learners



TRAINING

- e-Learning
- How-to videos
- Onsite & virtual training

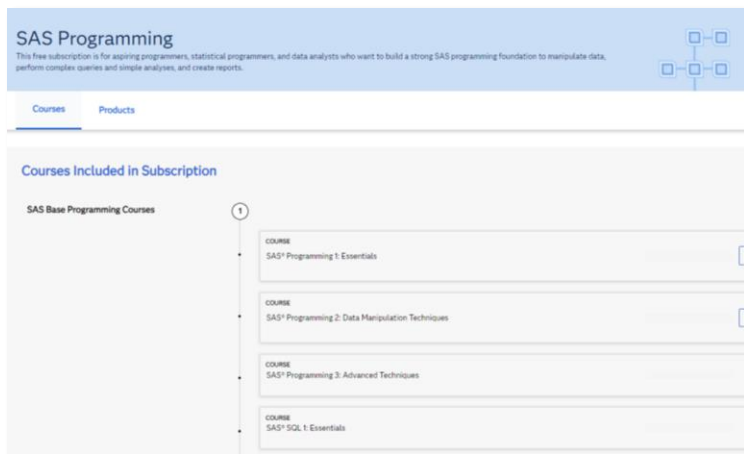


EDUCATIONAL RESOURCES

- Teaching materials
- Curriculum consulting
- Academic specializations
- SAS Educator Portal
- SAS Skill Builder for Students

Outside of Class Time

Training and Practicing



SAS Programming

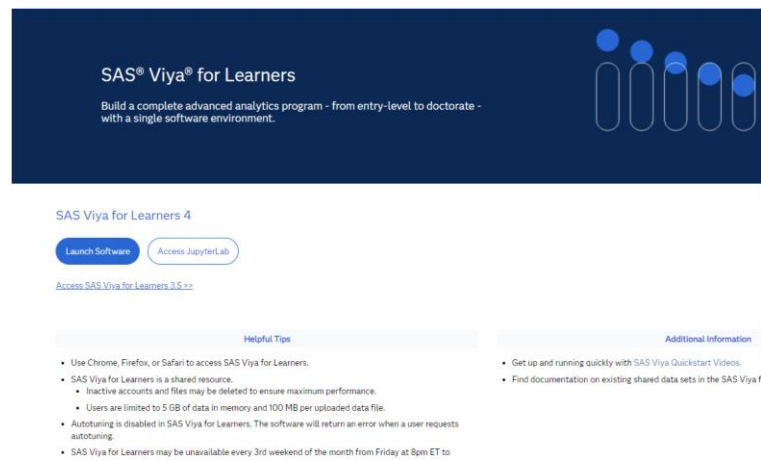
This free subscription is for aspiring programmers, statistical programmers, and data analysts who want to build a strong SAS programming foundation to manipulate data, perform complex queries and simple analyses, and create reports.

[Courses](#) [Products](#)

Courses Included in Subscription

SAS Base Programming Courses

1. COURSE
SAS® Programming 1: Essentials
- COURSE
SAS® Programming 2: Data Manipulation Techniques
- COURSE
SAS® Programming 3: Advanced Techniques
- COURSE
SAS® SQL 1: Essentials



SAS® Viya® for Learners

Build a complete advanced analytics program - from entry-level to doctorate - with a single software environment.

SAS Viya for Learners 4

[Launch Software](#) [Access JupyterLab](#)

[Access SAS Viya for Learners 3.5 >:](#)

Helpful Tips

- Use Chrome, Firefox, or Safari to access SAS Viya for Learners.
- SAS Viya for Learners is a shared resource.
 - Inactive accounts and files may be deleted to ensure maximum performance.
 - Users are limited to 5 GB of data in memory and 100 MB per uploaded data file.
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Additional Information

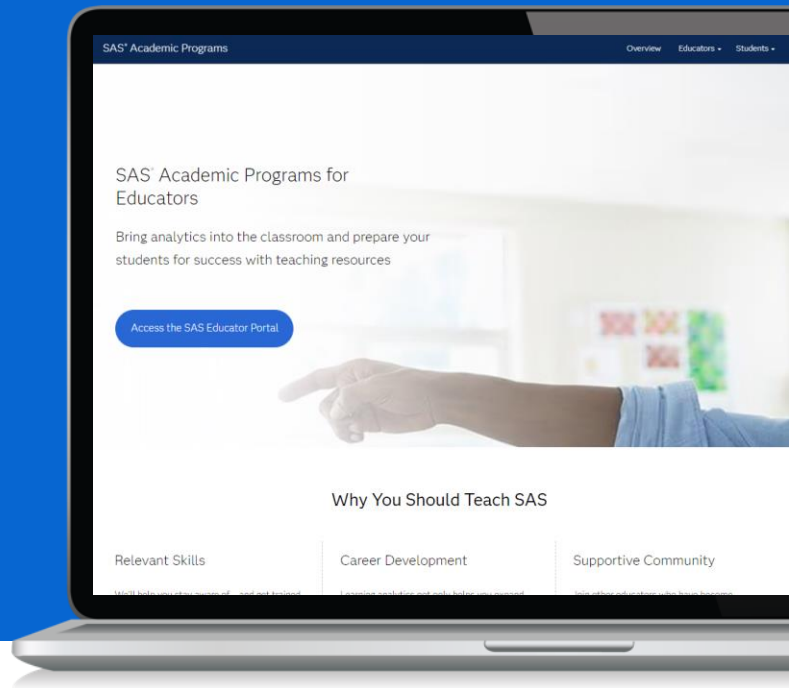
- Get up and running quickly with SAS Viya Quickstart Videos.
- Find documentation on existing shared data sets in the SAS Viya for Learners

Portals

Educator Portal

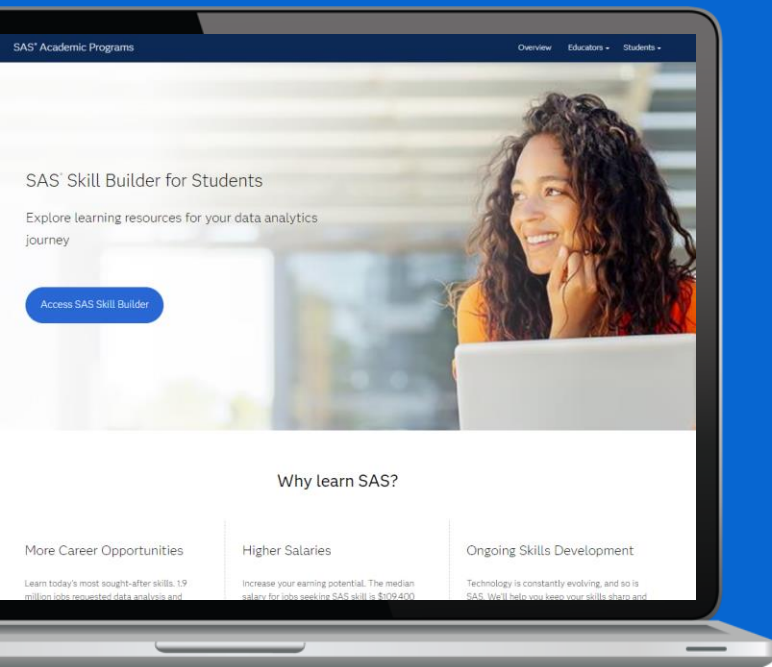
All-in-One Resource Center

- Free e-learning and software
- Certification paths and preparation materials
- Teaching materials
- Educator focused workshops & training
- Discounts & promotions



SAS Skill Builder for Students

Your future starts here



- Learn on your time
 - Free e-learning courses
 - Certification prep materials and exam discounts
- Free software
 - Three cloud-based options
- Stay motivated!
 - Early career resources
 - Discover why data analytics is a rewarding career path
 - Learn about what it means to be a data analytics professional
 - Connect with employers
- Cross-industry access
 - Analytical skills for any discipline

www.sas.com/skillbuilder

Launch Course Page

Live web

Overview


Course Materials

Instructor Material

Preclass Testing

Event Schedule

You are scheduled for a Live Web class starting 13-Jan-2025.

 Please complete the following tasks prior to class.


TEST LIVE WEB CLASSROOM

ACCESS LAB WITH SAS VIYA FOR LEARNERS

TIPS AND TRICKS

- Open the classroom 15 minutes prior to the start of class.
- Use the [Zoom client](#) to join class.
- If you cannot install the Zoom client or are having difficulties joining the classroom, please use the [Zoom web client](#).
- Use [computer audio](#). You can also dial in with [phone audio](#).
- Note that Internet Explorer does not support Zoom Audio
- Use dual monitors or a secondary device view the materials.

TECHNICAL SUPPORT INFORMATION



Contact us for technical difficulties related to audio or web conferencing, or the virtual lab.

<https://learn.sas.com/course/view.php?name=PBL5>

Course Materials

[Live web](#)[Overview](#)[Course Materials](#)[Instructor Material](#)

Course Materials

Session 1: Getting Started with Data and SAS

- 🔗 Create a SAS Profile with your university affiliated email address
- 🔗 Register for Viya for Learners Software
- 🔗 Launch Viya for Learners Software
- 📄 For Students: Accessing SAS Skill Builder for Students
- 📄 For Educators: Accessing the SAS Educator Portal

Session 2: Exploring Data Using Visualizations

- 📄 Activity: Exploring Tennis Players' Earnings in SAS Visual Analytics

Session 3: Data Wrangling and Descriptive Statistics

- 🔗 Course: SAS Viya Overview
- 🔗 Getting Started with SAS Studio

<https://learn.sas.com/course/view.php?name=PBL5>

Free e-Learning Courses

MY LIBRARY


- In Progress
- Learning Paths**
- Certification
- Live Classes
- Resources

LEARNING PATHS

These Learning Paths are free to educators and students. Each Learning Path includes SAS digital learning courses, which are online, hands-on tutorials that you can access anytime. You'll also find associated Certification Pathways that provide a curated sequence of courses along with exam content guides and sample questions, free practice exams and more to prepare you to take an industry-recognized SAS certification exam.


SAS Programming

For aspiring programmers, statistical programmers, and data analysts who want to build a strong SAS programming foundation to manipulate data, perform complex queries and simple analyses, and create reports.

[Explore](#)


Data Literacy and Data Visualization

For aspiring analysts who want to build a foundational understanding of data to prepare, explore, analyze, visualize, and communicate using real-world applications.

[Explore](#)


Statistical Analysis and Predictive Modeling in SAS 9

For aspiring analysts who want to learn how to confidently communicate about data, perform common statistical analyses, and dive into predictive modeling and other advanced analytics techniques.

[Explore](#)

Statistical Analysis, Predictive Modeling, and Machine Learning in SAS Viya

For aspiring analysts seeking to confidently communicate about data, perform statistical analyses, and explore advanced analytics techniques like predictive modeling, forecasting, optimization, and machine learning.

[Explore](#)

<https://learn.sas.com/my/>

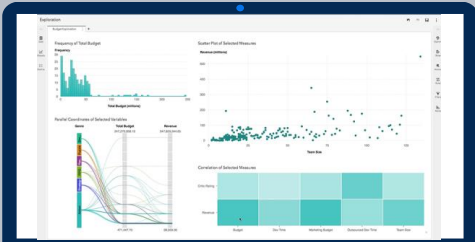
Software

Software for Teaching and Learning

Free Academic Software

VFL

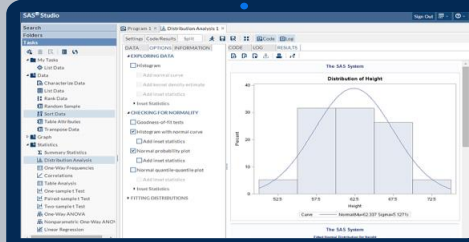
SAS® Viya® for Learners



www.sas.com/viyaforlearners

ODA

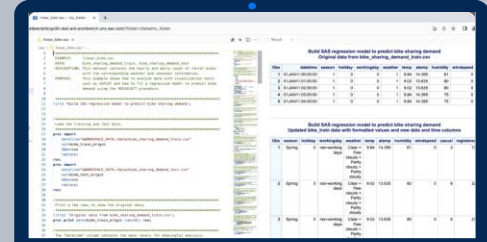
SAS® OnDemand for Academics



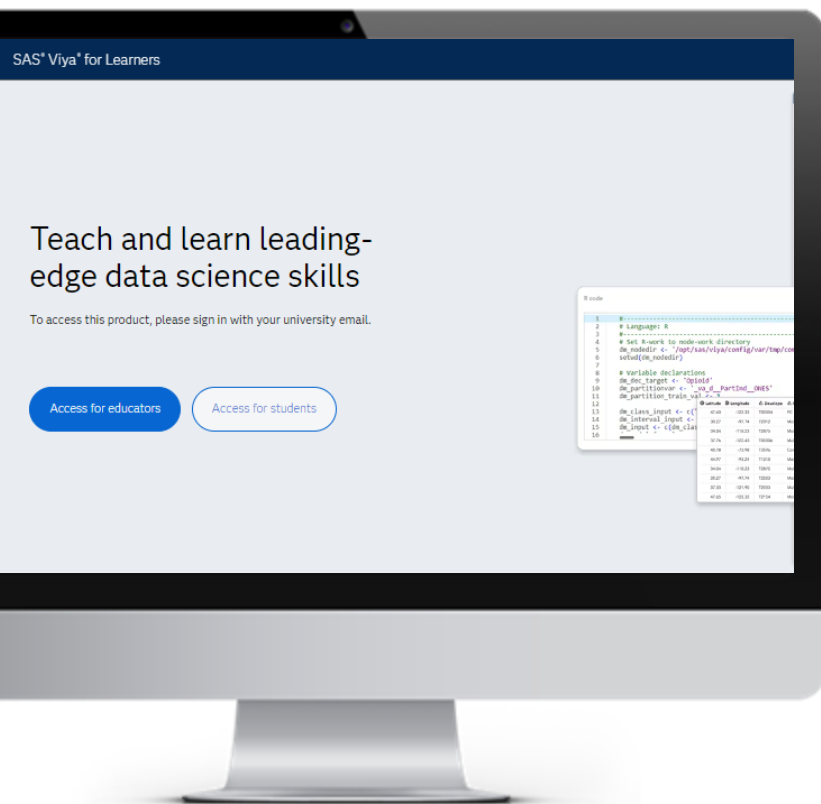
www.sas.com/ondemand

WFL

SAS® Viya® Workbench for Learners



www.sas.com/wfl



www.sas.com/viya-learners

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SAS Viya for Learners

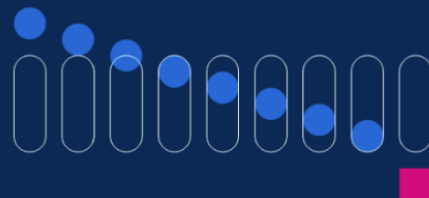
Free Software

- Free to students and faculty
- Cloud environment
- Use .edu email when registering
- Works best with Chrome browser
- Programming, visualization, modeling, and more!

SAS Viya for Learners Launch Page

SAS® Viya® for Learners

Build a complete advanced analytics program - from entry-level to doctorate - with a single software environment.



SAS Viya for Learners 4

[Launch Software](#)[Access JupyterLab](#)

Viya for Learners 4 has replaced Viya for Learners 3.5. Viya for Learners 3.5 is no longer available, as of August 28, 2024.

Helpful Tips

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Additional Information

- Get up and running quickly with [SAS Viya Quickstart Videos](#).
- Find documentation on existing shared data sets in the [SAS Viya for Learners Data Repository](#).



<https://learn.sas.com/vfl>

SAS Viya for Learners

Getting Started



<https://www.youtube.com/watch?v=NRZPUs3tBM4>

Data Upload

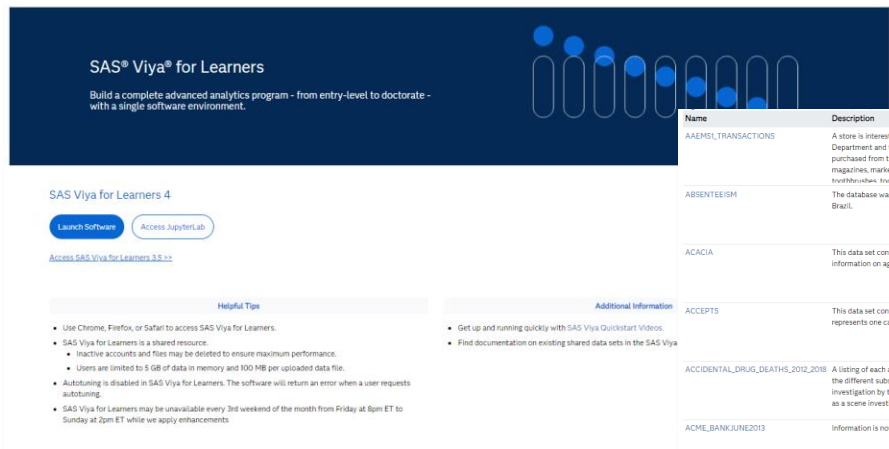
Finding Data + Uploading Data

Viya for Learners Data Repository

Over 200 data sets, 8 Industries

SAS® Viya® for Learners

Build a complete advanced analytics program - from entry-level to doctorate - with a single software environment.



SAS Viya for Learners 4

[Launch Software](#) [Access JupyterLab](#)

[Access SAS Viya for Learners 3.5 >>](#)

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Additional Information

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Name	Description	Industry Alignment	SAS Platform	VFL Course Folder
AXEHSI_TRANSACTIONS	A store is interested in determining the associations between items purchased from the Health and Beauty Aids Department and the Stationery Department. The store chose to conduct a market basket analysis of specific items purchased from these two departments, including bar soap, bows, candy bars, deodorant, greeting cards, magazines, markers, pain relievers, pencils, pens, perfume, photo processing, prescription medication, shampoo, toothbrushes, toothpaste, and sunscreen cream. This data set from the SAS course 6&8FMSI contains information	Business Health	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
ABSENTEEISM	The database was created with records of absenteeism at work from July 2007 to July 2010 at a courier company in Brazil.	Business	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
ACACIA	This data set contains growth data on Acacia negra, a forest species in the Southern region of Brazil. Data include information on age, diameter, height, volume, basal area, increments, and mortality data.	Environment	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
ACCEPTS	This data set contains cases of individuals who applied for and were granted an automobile loan. Each observation represents one case.	Banking	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
ACCIDENTAL_DRUG_DEATHS_2012_2018	A listing of each accidental death associated with drug overdose in Connecticut from 2012 to 2018. A "Y" value under the different substance columns indicates that particular substance was detected. Data are derived from an investigation by the Office of the Chief Medical Examiner which includes the toxicity report, death certificate, as well as a scene investigation.	Health	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
ACME_BANKJUNE2013	Information is not currently available.	Banking	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	TUNDATA
AFFILIATE_CODES	Information is not currently available.	Other	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	TUNDATA
AIR_CARRIER_T100_SEGEMENT_17_20	This data set on aviation is from the US Department of Transportation's Bureau of Transportation Statistics.	Business Government	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
AIRLINCOLNDATA	These are simulated data which can be used to estimate the probability of no-show by individual customers for a fictitious airline, AirLincoln. Data include demographic factors about the made-up passengers, as well as weather and flight information. The outcome in the training data is a Q1 variable for show/no-show - and a scoring data set has also been simulated.	Business	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC
AIRLINCOLNDATA_SCORE	These are simulated data which can be used to estimate the probability of no-show by individual customers for a fictitious airline, AirLincoln. Data include demographic factors about the made-up passengers, as well as weather and flight information. The outcome in the scoring data is a Q1 variable for show/no-show - and a training data set has also been simulated.	Business	SAS Studio (VFL) SAS Visual Analytics (VFL) Jupyter (VFL)	ACADEMIC

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Viya for Learners Data Repository

Searchable by Dataset Name, Industry...

Entries per page
10

Search

Sort by
Dataset Name

Fields

- Data Information Document
- Dataset Name**
- Description
- File Extension
- Industry Alignment
- Related Classroom Activities
- SAS Platform
- VFL Course Folder
- VFL Path

Other

- Time added
- Time modified
- Author first name
- Author surname

2

Enter keywords in the Search field and hit Enter

1

Search and sort by:

- Dataset Name
- Description
- Industry Alignment
- ...

Suggested Datasets by Industry

Banking, Business

Banking

DEVELOP

A target marketing campaign for a bank was undertaken to identify segments of customers who are likely to respond to a variable annuity (insurance product) marketing campaign. A data set was created with 32,264 cases (banking customers) and 47 input variables. The binary target variable, *ins*, indicates whether the customer bought the variable annuity product. The 47 input variables represent other product usage in a three-month period and demographics. Two of the

▲ Banking
Business
▼

SAS Studio (VFL)
SAS Visual Analytics (VFL)
Jupyter (VFL)

DMML35

Business

BIGORGANICS

A supermarket in the United Kingdom (UK) has a customer loyalty program and is offering a new line of organic products. As an initial buyer incentive plan, the supermarket provided coupons for the organic products to all of the loyalty program participants and collected data that include whether these customers have purchased any of the organic products. The supermarket's management wanted to determine which customers are likely to purchase these organic products.

▲ Business
▼

SAS Studio (VFL)
SAS Visual Analytics (VFL)
Jupyter (VFL)

TUNDATA

Suggested Datasets by Industry

Government, Health, Technology

Government

FOOD_INSPECTIONS_CHICAGO

This information is derived from inspections of restaurants and other food establishments in Chicago from January 1, 2010 to the present. Inspections are performed by staff from the Chicago Department of Public Health's Food Protection Program using a standardized procedure. The results of the inspection are inputted into a database, then reviewed and approved by a State of Illinois Licensed Environmental Health Practitioner (LEHP).

Government

SAS Studio (VFL)
SAS Visual Analytics (VFL)
Jupyter (VFL)

ACADEMIC

Health

ACCIDENTAL_DRUG_DEATHS_2012_2018 A listing of each accidental death associated with drug overdose in Connecticut from 2012 to 2018. A "Y" value under the different substance columns indicates that particular substance was detected. Data are derived from an investigation by the Office of the Chief Medical Examiner which includes the toxicity report, death certificate, as well as a scene investigation.

Health

SAS Studio (VFL)
SAS Visual Analytics (VFL)
Jupyter (VFL)

ACADEMIC

Technology

SIMPLE_PATH

Each row represents the page visited by a visitor to a website. Contains details about the pages visited, the order in which the pages were visited, and the purchase amount (if any). These data are completely made up.

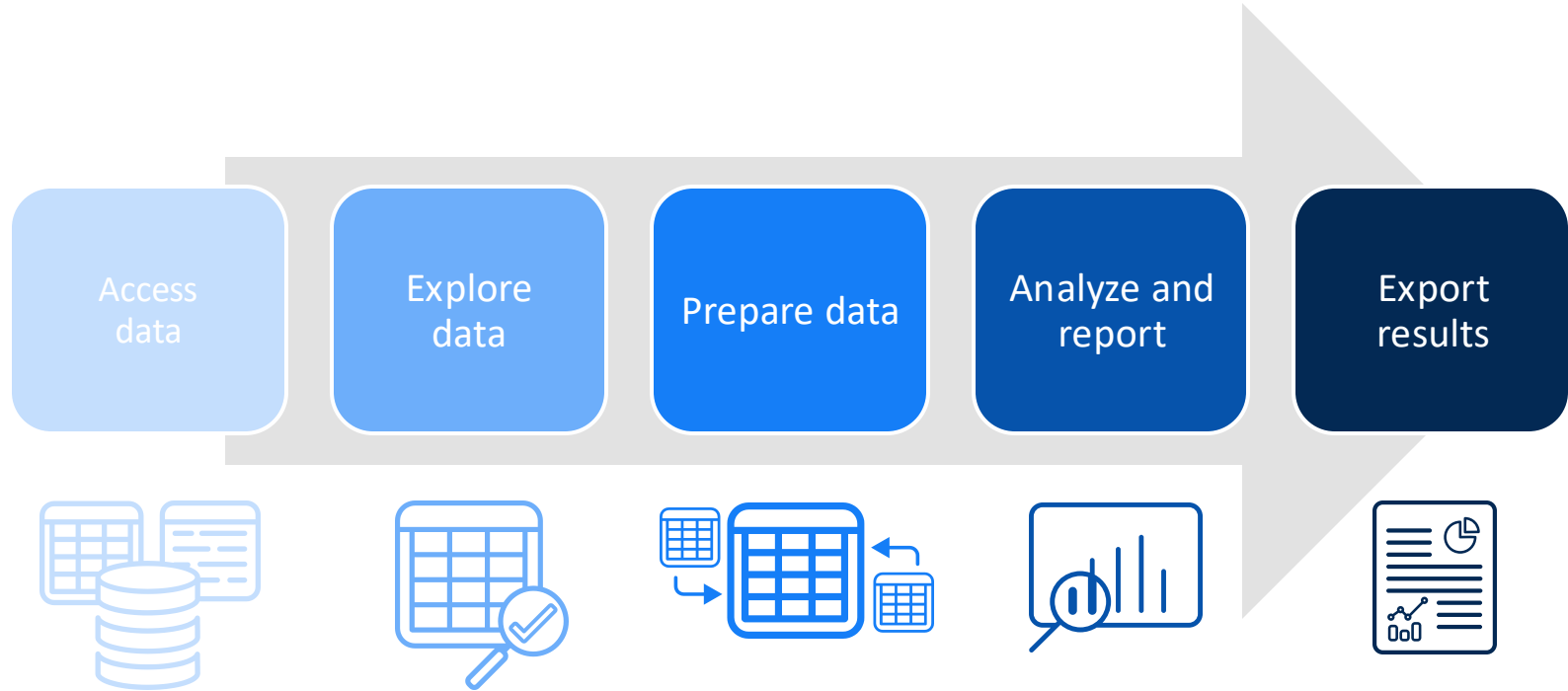
Business
Technology

SAS Studio (VFL)
SAS Visual Analytics (VFL)
Jupyter (VFL)

YVA285

Starting Our Journey...

Analytical Journey, Simplified



SAS Communities

www.sas.com/communities

Get SAS tips, share your knowledge, and find out about upcoming events.

Global community of users for 24/7 support.

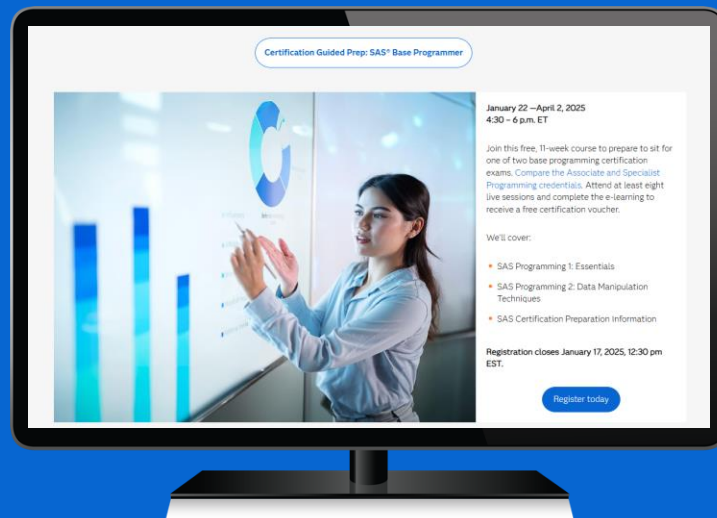
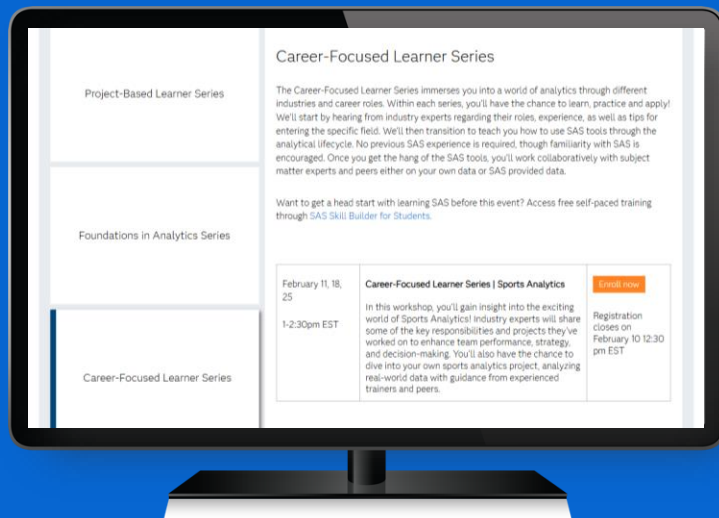
Case studies, documents, blogs, webinars, and more.

SAS Communities gives you **immediate access** to **thousands of SAS users** across the globe.

From learners to data professionals, the platform provides valuable connections and insights into **real world problems** and **processes**.

There is no data problem too obscure!

Free Academic Workshops



www.sas.com/academicworkshops

Things to do before tomorrow



Familiarize yourself with VFL



Get access to Skill Builder or Educator Portal



Upload your data!