

A Review of "Free" Massive Open Online Content (MOOC) for SAS® Learners

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Abstract

Leading online providers are now offering SAS® users with “free” access to content for learning how to use and program in SAS. This content is available to anyone in the form of massive open online content (or courses) (MOOC). Not only is all the content offered for “free”, but it is designed with the distance learner in mind, empowering users to learn using a flexible and self-directed approach. As noted on Wikipedia.org, “A MOOC is an online course, content, or other resource aimed at unlimited participation and made available in an open access forum using the web.” This presentation illustrates how anyone can access a wealth of learning technologies including comprehensive student notes, instructor lesson plans, hands-on exercises, PowerPoints, audio, webinars, and videos.

Introduction

The age of massive open online content (and courses), often referred to as MOOC, is not only a reality, it is gaining huge popularity among students and professionals. With education costs on the rise, and in many cases increasing out of control, several higher education institutions and organizations are challenging the current education financial model by offering MOOCs for students, professionals and others to choose from. Higher education Universities such as, Princeton University, Stanford University, Harvard University, Massachusetts Institute of Technology (MIT), University of Pennsylvania, Duke University, University of Michigan, and organizations in the private sector such as, SAS Institute Inc., Coursera, and a number of other organizations and universities around the world are now offering online courses and certificate programs. A number of public, private, and online universities are now offering degree programs that can be completed exclusively online as well.

What is a Massive Open Online Course/Content (MOOC)?

As technology continues to reach for newer and greater horizons, it is becoming increasingly more important for students, professionals, and those with a curiosity to acquire knowledge to have avenues to continue their quest for learning. Many forward-thinking organizations, universities and degree-granting institutions use the advances that technology provides to help make some of their courses available to the masses around the world. A MOOC offers learners everywhere with an alternative to mainstream courses, degrees, and certificate programs that were once only available through brick-and-mortar classrooms where attendees were forced to commute to supported locations or become a resident on college campuses.

A MOOC allows courses and content to be freely taught by the best and brightest in open- and online learning environments to massive audiences. By delivering education in a MOOC format, anyone with a computer (workstation, laptop or “smart” device), an Internet connection and a web browser, can select or enroll in one of the many “free” courses currently being offered, learn from “real-time” or recorded lessons from the comfort of their living rooms, bedrooms, dorms, offices, beach houses, or anywhere else they are in the world. Needless to say, the availability of “free” resources along with the flexibility they offer has fostered a high degree of excitement, enthusiasm and an ever-growing audience for the MOOC format.

How is a MOOC Structured?

A MOOC is structured very similar to an online course. A MOOCs structure typically consists of a course title, abstract or description of its content, a syllabus, expected learning objectives, “live” or recorded lectures or lessons, reading assignments, hands-on assignments, and quizzes. Students tune in to the “live” or recorded lectures, perform the required reading and hands-on assignments, and take the quizzes, adhering to the required scheduled timeline. At the completion of a MOOC, students receive a grade from the MOOC leader or instructor, just as if they had enrolled in a traditional course.

A Review of “Free” MOOC Resources

As the age of massive open online content (and courses) is upon us, the world of the SAS user is also being positively impacted with many “free” MOOC resources. Numerous MOOC courses and content are now available to help support SAS users in their quest to effectively improve their analytical, programming, statistical, and reporting skills. For content and courses that may contain a sizeable amount of material, some MOOC offerings may involve splitting larger and more involved topics into smaller, more digestible, pieces, a process known as specializing. So, where can SAS users find “free” MOOC resources? The following list of “free” MOOC resources is available to SAS users everywhere.

“Free” MOOC Resources for SAS Users

- 1) SAS® University Edition software
- 2) Online SAS documentation in PDF and HTML format on support.sas.com
- 3) SAS Proceedings “White” papers on LexJansen.com
- 4) SAS Press and SAS Talks Webinars
- 5) SAS YouTube Channel Videos

SAS® University Edition Software

The SAS® University Edition is “free” to anyone. It’s under the SAS Analytics U umbrella and includes e-Learning modules to help you learn the SAS software. Available for PC, Mac, or Linux Workstations, the SAS University Edition includes Base SAS®, SAS/STAT®, SAS/IML®, SAS/ACCESS® for Windows, and SAS Studio. It works through Virtualization Software in standalone mode and your Browser to access to SAS software.

Base SAS Features

The Base SAS software contains a built in DATA step programming language, the ability to access a wide-range of data sources, comprehensive set of functions to handle data manipulation, an assortment of “canned” and ready-to-use procedures, a comprehensive SQL language, reporting and customization feature for reports and results using Output Delivery System (ODS), data display informats and output formats, comprehensive data visualization features known as ODS Statistical Graphics, data management capabilities, and much more.

SAS/STAT® Features

The SAS/STAT software supports the application of the latest statistical techniques. It supports the following statistical routines: Analysis of Variance, Bayesian Analysis, Categorical Data Analysis, Cluster Analysis, Mixed Models, Multivariate Analysis, Nonparametric Analysis, Regression Analysis, Survey Sampling and Analysis, Statistical Graphics, and much more.

SAS/IML® Features

The SAS/IML software is an interactive matrix programming language and supports the ability to conduct Exploratory Analysis, the integration with the R programming language, dynamically linked graphics, and much more.

SAS/ACCESS® Features

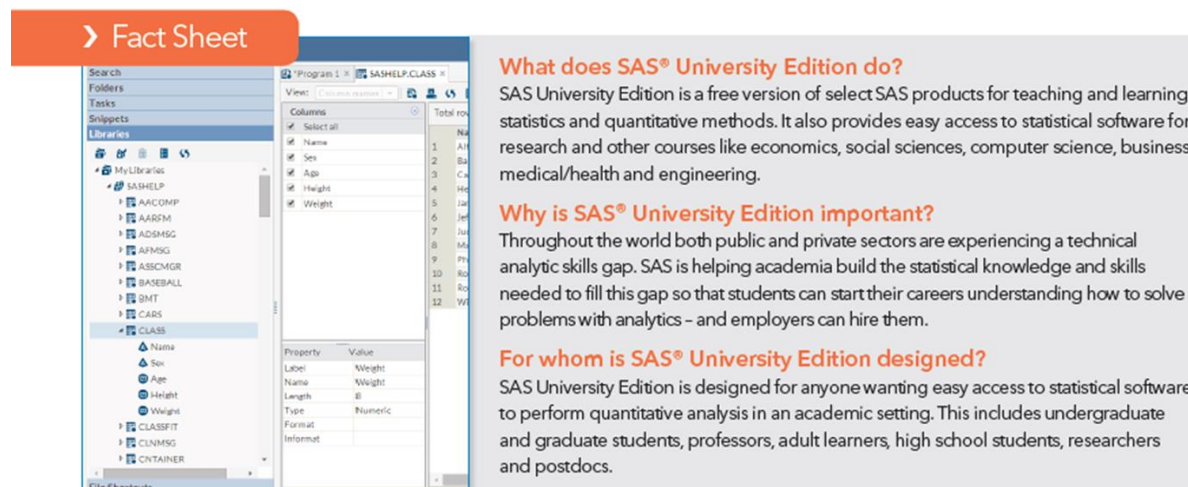
The SAS/ACCESS software supports the ability to read, write, and update data sources; provides a flexible query language; supports the access to a variety of data sources including text files, dat files, CSV files, Excel spreadsheets, Microsoft SQL Server, and ODBC; and much more.

SAS Studio

The SAS Studio software serves as the user interface; supports Web applications; the access to data files, libraries and programs; the ability to recover files; dynamically link graphics; and much more.

SAS University Edition Fact Sheet

The SAS University Edition software Fact Sheet can be access at sas.com/universityedition, see Figure 1, below.



Fact Sheet

What does SAS® University Edition do?
SAS University Edition is a free version of select SAS products for teaching and learning statistics and quantitative methods. It also provides easy access to statistical software for research and other courses like economics, social sciences, computer science, business, medical/health and engineering.

Why is SAS® University Edition important?
Throughout the world both public and private sectors are experiencing a technical analytic skills gap. SAS is helping academia build the statistical knowledge and skills needed to fill this gap so that students can start their careers understanding how to solve problems with analytics – and employers can hire them.

For whom is SAS® University Edition designed?
SAS University Edition is designed for anyone wanting easy access to statistical software to perform quantitative analysis in an academic setting. This includes undergraduate and graduate students, professors, adult learners, high school students, researchers and postdocs.

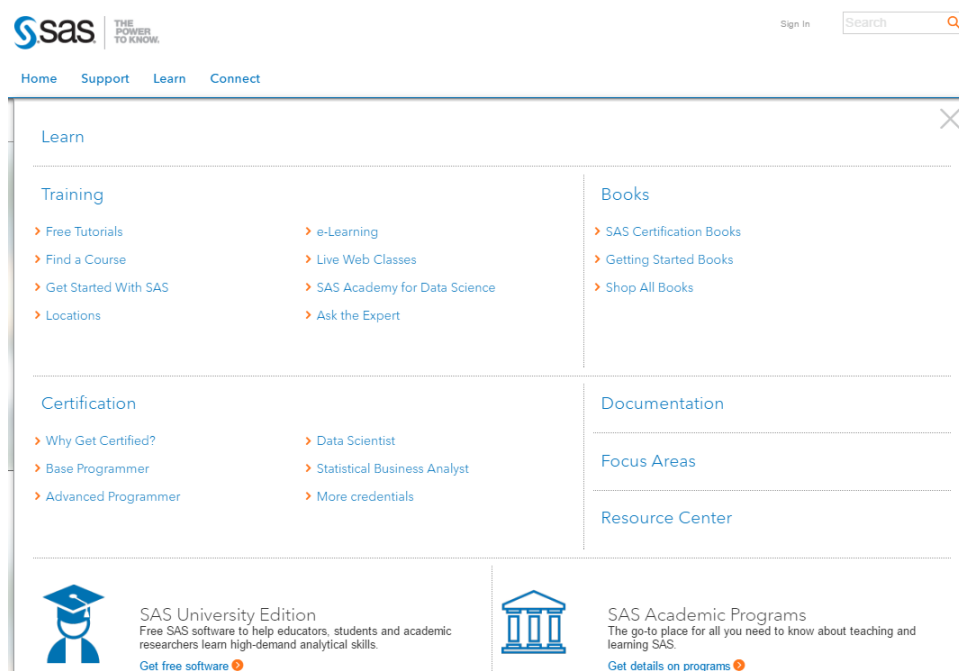
SAS® University Edition

Free statistical software to improve research and launch careers

Figure 1. Snapshot from SAS University Edition Fact Sheet at sas.com/universityedition

SAS' Technical Support Website

SAS' technical support website, support.sas.com, contains a wealth of "free" SAS technical support content. Users are provided with access to timely information pertaining to: Admin, Programmer, Statistician and User content; the "best" in class comprehensive technical support content; training and books; what's happenings including User Group Information; access to "free" webinars and podcasts; access to code samples; access to SAS comprehensive documentation; and much more. The support.sas.com user interface is illustrated in Figure 2, below.



SAS THE POWER TO KNOW

Sign In Search

Home Support Learn Connect

Learn

Training

- > Free Tutorials
- > Find a Course
- > Get Started With SAS
- > Locations
- > e-Learning
- > Live Web Classes
- > SAS Academy for Data Science
- > Ask the Expert

Books

- > SAS Certification Books
- > Getting Started Books
- > Shop All Books

Certification

- > Why Get Certified?
- > Base Programmer
- > Advanced Programmer
- > Data Scientist
- > Statistical Business Analyst
- > More credentials

Documentation

Focus Areas

Resource Center

SAS University Edition
Free SAS software to help educators, students and academic researchers learn high-demand analytical skills.
[Get free software](#)

SAS Academic Programs
The go-to place for all you need to know about teaching and learning SAS.
[Get details on programs](#)

Figure 2. support.sas.com User Interface

Knowledge Base – SAS Products and Solutions

Users can easily explore the Knowledge Base of SAS Products and Solutions, System Requirements, Install Center, Third-Party Software Reference, Documentation, Papers, Samples & SAS Notes, and Focus Areas by accessing <http://support.sas.com/software/>, illustrated in Figure 3, below.

Figure 3. Knowledge Base – SAS Products and Solutions

Knowledge Base – Documentation

Users have the ability to access a comprehensive set of SAS product documentation in either HTML or PDF format and can be accessed at <http://support.sas.com/documentation/index.html>, as shown in Figure 4, below.

Figure 4. Knowledge Base – SAS Product Documentation

Published SAS Proceedings and “White” Papers

Users are provided access to thousands of “free” published SAS “white” papers all in the form of PDF documents. Provided with a built-in Google® search applet, users are able to search for content from 1976 to the present from SGF / SUGI, SUEGI, the various Regional conferences, PharmaSUG / PharmaSUG China, PhUSE, CDISC Forum, and other venues. Papers can be accessed using the <http://www.lexjansen.com/> user interface, as shown in Figure 5, below.

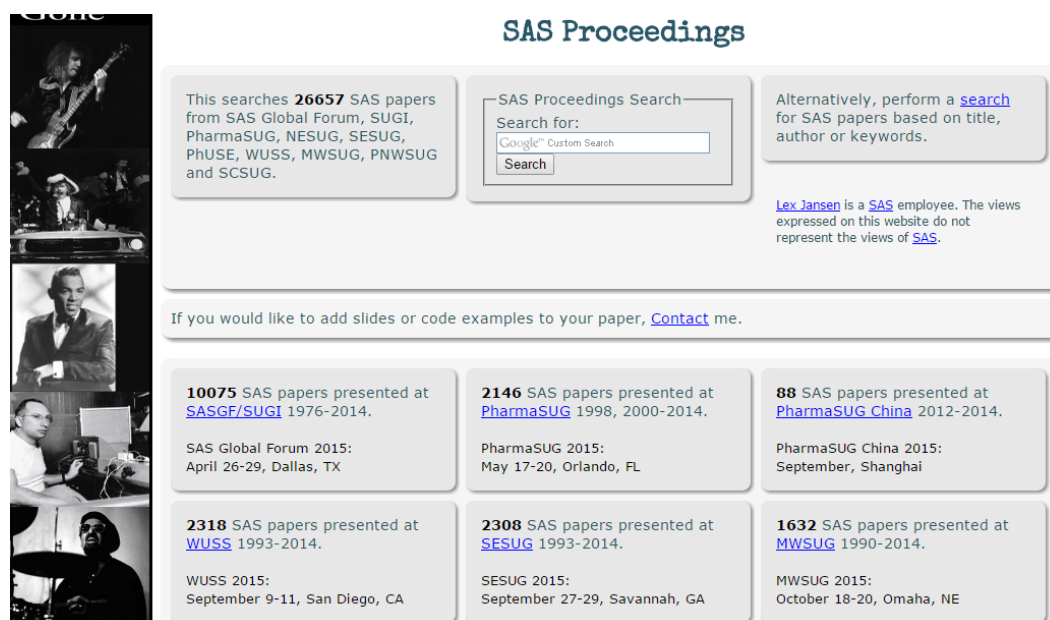


Figure 5. Published SAS Proceedings

LexJansen.com – Search Feature

LexJansen.com provides a built-in Google search applet that can be used by users to find papers of interest, as shown in Figure 6, below.

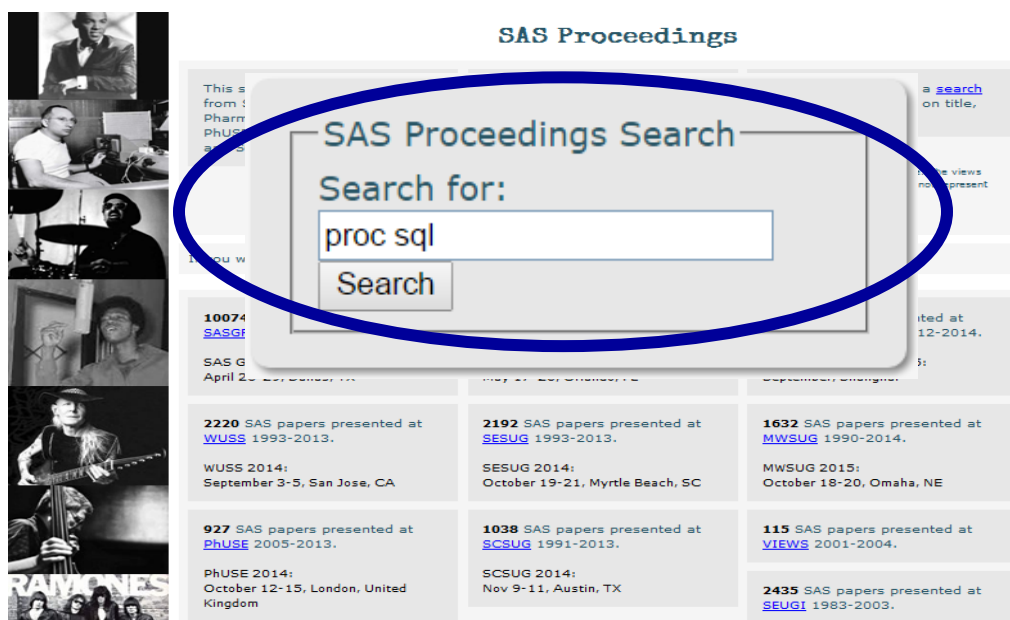


Figure 6. Built-in Google Search Applet in LexJansen.com

LexJansen.com – Search Results

LexJansen.com's search results display the most relevant results first, based on the search keyword or phrase entered in the search box, as illustrated in Figure 7, below.

This searches SAS proceedings from
SAS Global Forum, SUGI, PharmaSUG,
PhUSE, NESUG, SESUG, SCSUG, WUSS, MWSUG,
SCSUG and PNWSUG.

About 5,270 results (0.27 seconds)

powered by Google™ Custom Search

[Undocumented and Hard-to-find PROC SQL Features](#)
www.lexjansen.com/nasug/nasug07/bb/bb07.pdf
File Format: PDF/Adobe Acrobat
Kirk Paul Lafler, Software Intelligence Corporation, Spring Valley, California ... The SQL Procedure contains many powerful and elegant language features for ...

[251-2012: Exploring DATA Step Merges and PROC SQL Joins](#)
support.sas.com/resources/papers/proceedings12/251-2012.pdf
File Format: PDF/Adobe Acrobat
Kirk Paul Lafler, Software Intelligence Corporation, Spring Valley, California. Abstract. Explore the various DATA step merge and PROC SQL join processes.

[070-30: Exploring DICTIONARY Tables and Views](#)
www2.sas.com/proceedings/sugi30/070-30.pdf
File Format: PDF/Adobe Acrobat
Kirk Paul Lafler, Software Intelligence Corporation Lafler, Kirk Paul (2003), "Undocumented and Hard-to-find PROC SQL Features," Proceedings of the ...

[035-2009: Exploring PROC SQL Joins and Join Algorithms](#)
support.sas.com/resources/papers/proceedings09/035-2009.pdf
File Format: PDF/Adobe Acrobat
Kirk Paul Lafler, Software Intelligence Corporation, Spring Valley, California ... The SQL procedure is a simple and flexible tool for joining tables of data together .

[Exploring the PROC SQL _METHOD Option](#)
www.lexjansen.com/nasug/nasug12/cc/cc06.pdf
File Format: PDF/Adobe Acrobat
Page 1. Exploring the PROC SQL _METHOD Option. Kirk Paul Lafler, Software Intelligence Corporation, Spring Valley, California. Abstract. The SQL Procedure ...

[DATA Step versus PROC SQL Programming Techniques](#)
analytics.ncsu.edu/sesug/2009/FF003.Lafler.pdf
File Format: PDF/Adobe Acrobat
Kirk Paul Lafler, Software Intelligence Corporation. ABSTRACT. Are you considering whether to use a DATA step or PROC SQL step in your next project?

Figure 7. LexJansen.com Search Results

Viewing a Paper from LexJansen.com

Any paper of interest that is found with the built-in Google search applet and/or displayed in the search results can be viewed, saved, or printed as needed. A "sample" paper from LexJansen.com is shown in Figure 8, below.

Paper BB03-2014

Five Little Known, But Highly Valuable and Widely Usable, PROC SQL Programming Techniques

Kirk Paul Lafler, Software Intelligence Corporation, Spring Valley, California

Abstract

The SQL Procedure contains a number of powerful and elegant language features for SQL users. This presentation highlights five little known, but highly valuable and widely usable, topics that will help users harness the power of the SQL procedure. Topics include using PROC SQL to perform FIRST., LAST., and Between in BY-group processing; constructing and searching the contents of a value-list macro variable for a specific value; data validation operations; data summary operations to process down rows and across columns; and using the MSGLEVEL= system option and _METHOD SQL option to capture and gain greater insight into the processes during query evaluation, the algorithm selected and used by the optimizer when processing a query, testing and debugging operations, and other processes.

Introduction

The SQL procedure is a wonderful tool for querying and subsetting data; restructuring data by constructing case expressions; constructing and using virtual tables known as a view; access information from Dictionary tables; and joining two or more tables to explore data relationships. Occasionally, an application problem comes along where the SQL procedure is either better suited or easier to use than other more conventional DATA and/or PROC step methods. As each situation presents itself, PROC SQL should be examined to see if its use is warranted for the task at hand.

Example Tables

The examples used throughout this paper utilize a database of two tables. (A relational database is a collection of tables.) The data used in all the examples in this paper consists of a selection of movies that I've viewed over the years. The Movies table consists of six columns: title, length, category, year, studio, and rating. Title, category, studio, and rating are defined as character columns with length and year being defined as numeric columns. The data stored in the Movies table is depicted below.

MOVIES Table

	Title	Length	Category	Year	Studio	Rating
1	Brave Heart	177	Action Adventure	1995	Paramount Pictures	R
2	Carablanca	103	Drama	1942	MGM / UA	PG
3	Christmas Vacation	97	Comedy	1989	Warner Brothers	PG-13
4	Coming to America	116	Comedy	1988	Paramount Pictures	R
5	Dracula	130	Horror	1933	Columbia TriStar	R
6	Dressed to Kill	105	Drama Mystery	1980	Filmways Pictures	R
7	Forrest Gump	142	Drama	1994	Paramount Pictures	PG-13
8	Ghost	127	Drama Romance	1990	Paramount Pictures	PG-13
9	Jaws	125	Action Adventure	1975	Universal Studios	PG
10	Jurassic Park	127	Action	1993	Universal Pictures	PG-13
11	Lethal Weapon	110	Action Cop & Robber	1987	Warner Brothers	R
12	Michael	106	Drama	1997	Warner Brothers	PG-13
13	National Lampoon's Vacation	98	Comedy	1983	Warner Brothers	PG-13
14	Pokegost	115	Horror	1982	MGM / UA	PG
15	Rocky	120	Action Adventure	1976	MGM / UA	PG
16	Scarface	170	Action Cop & Robber	1983	Universal Studios	R
17	Silence of the Lambs	118	Drama Suspense	1991	Orion	R
18	Star Wars	124	Action Sci-Fi	1977	Lucas Film Ltd	PG
19	The Hunt for Red October	135	Action Adventure	1990	Paramount Pictures	PG
20	The Terminator	108	Action Sci-Fi	1984	Live Entertainment	R
21	The Wizard of Oz	101	Adventure	1939	MGM / UA	G
22	Titanic	194	Drama Romance	1997	Paramount Pictures	PG-13

The data stored in the ACTORS table consists of three columns: title, actor_leading, and actor_supporting, all of which are defined as character columns. The data stored in the Actors table is illustrated below.

Page 1

Figure 8. A "Sample" Paper from LexJansen.com

SAS Press and SAS Talks Webinars

SAS Press and SAS Talks provide users with a number of effective presentations developed by SAS experts, instructors, authors, customers and students. Users also have for their viewing pleasure a SAS YouTube Channel with thousands of videos in a variety of unique categories: Analytics, Featured SAS Customer Stories, SAS Customer Stories, SAS Visual Analytics, SAS Data Management, SAS High-Performance Analytics, Popular Uploads, and Created Playlists. I always enjoy sharing a cost-effective method of upgrading staff member skills by scheduling monthly lunch-time pizza webinars where staff member view, eat and discuss the merits associated with the techniques they've learned from the webinar. This represents a winning scenario for everyone involved.

SAS Press Webinar Series

SAS Press provides users with a series of "free" informative Webinars that were developed and presented by authors. These archived webinars can be accessed at, <http://support.sas.com/publishing/bbu/webinar.html>, as illustrated in Figure 9, below.

TRAINING & BOOKS

- Books
 - SAS Certification Books
 - Upcoming Titles
 - Author Pages
 - Academics
 - Resellers
 - Publish with SAS
- Training
- Certification
- SAS Global Academic Program
- SAS OnDemand

SAS Press» Webinars, Videos, and Podcasts

SAS Press Webinars

SAS Press Webinar Series

- Alex Dmitrienko, 2006
- Kirk Lafler, 2006
- Kirk Lafler, 2006
- Jack Shostak, 2006
- Michael Raithel, 2006
- Cynthia Zender and Michele Burlew, 2009

Cynthia Zender and Michele Burlew
 Topic: Cynthia Zender and Michele Burlew offer their vast expertise in a new Webinar presentation: Output Delivery System: The Basics and Beyond.
[View the archived presentation.](#)

Kirk Lafler
 Topic: Exploring Dictionary Tables with PROC SQL
[View the archived presentation.](#)

Kirk Lafler
 Topic: Tips and Techniques for Producing Quick Results with PROC SQL
[View the archived presentation.](#)

Figure 9. SAS Press Webinar Series

SAS Talks Webinar Series

SAS Talks provides users with a series of "free" informative Webinars that were developed and presented by SAS experts, instructors, authors, customers, and students. These monthly webinars are archived for later viewing by users and can be accessed at, <http://support.sas.com/community/events/sastalks/#s1=2>, as illustrated in Figure 10, below.

HAPPENINGS / SAS TALKS

HAPPENINGS

- Users Groups
- **SAS Talks**
- E-newsletters
- RSS & Blogs

SAS Talks

SAS Talks is a webinar series featuring technical presentations by SAS experts, instructors, authors, customers and students. Monthly live webinars are archived for later viewing, and related resources are offered within each area.



Figure 10. SAS Talks Webinar Series

Archived SAS Talks Webinars

SAS Talks also provides users with a number of archived webinars. These webinars are archived monthly and available on-demand at, <http://support.sas.com/community/events/sastalks/ondemand.html>, as shown in Figure 11, below.


	My Favorite SAS® Enterprise Guide® 5.1 Tricks SAS® expert and SAS Global Forum 2014 Conference Chair Marje Fecht will present her favorite SAS Enterprise Guide 5.1 tricks.
	What's New in SAS® Enterprise Miner™ 13.1 SAS® expert Jonathan Wexler showcases the highlight reel for our newest release of SAS Enterprise Miner.
	A Hitchhiker's Practical Guide to Text Analysis Catch an informative ride on a text analytics journey.
	PROC DATASETS: The Swiss Army Knife of SAS® Procedures If you write programs using Base SAS, whether you're a newbie, intermediate or advanced – this webinar is for you.
	What's New in SAS® Enterprise Miner™ 13.1 SAS® expert Jonathan Wexler showcases the highlight reel for our newest release of SAS Enterprise Miner.
	Time Series Clustering: Analysis of Dynamic Systems SAS® expert David Corliss will show you how to apply cluster analysis methodology to time series data
	SAS® What's New in SAS® Visual Analytics 6.3 Watch this series of informative webinars and find out what's new in our latest release of SAS Visual Analytics.
	SAS® Integration with Hadoop: Part II Tune in for part two of our series on Hadoop – learning more about SAS integration with Hadoop.
	Getting Started with SAS® Visual Analytics Hear from SAS expert Mary Osborne as she helps make analytics more approachable.

Figure 11. Archived SAS Talks Webinars

- 
- Getting Started with SAS® Graph Template Language**
SAS R & D Director, Sanjay Matange, will demonstrate different ways to get, create or customize graphs in this live webinar.
- 
- SAS® 9.4: What's New for SAS® Administrators**
SAS Principal Product Manager Amy Peters highlights what's new in SAS 9.4!
- 
- SAS® Visual Analytics for Higher Education**
SAS Visual Analytics case study presented by Marc Vaglio-Laurin
- 
- How to Integrate SAS® and Teradata**
Explore the nuts and bolts of integrating SAS and Teradata.
- 
- Getting Started with SAS® Graph Template Language**
ways to get, create or customize graphs.
- 
- New Features: SAS® Activity-Based Management**
Learn how the product morphs into SAS Cost and Profitability Management later in 2013.
- 
- Building Credit Scorecards Using SAS® Enterprise Miner™**
Learn how to use Credit Scoring for SAS Enterprise Miner.
- 
- What's Hot, What's Not: Skills for SAS® Professionals**
Examine the extensive array of procedures, programming tools and techniques honed by current and prior generations of users.
- 
- Getting Started with SAS®**
Have no fear – we're bringing SAS experts to the rescue!
- 
- Getting Started with SAS® and Hadoop**
In this live webinar, SAS technical expert Jeff Bailey covers the basics of SAS and Hadoop.
- 
- Introduction to Custom Tasks in SAS® Enterprise Guide®**
In this session, you'll learn what custom tasks are available and how you can download and install them. You'll also see a few of the tasks in action as part of a live demo.
- 
- Live at SAS® Global Forum: Get the Most from Your SAS Experience**
Taped live during SAS Global Forum 2013, this discussion outlines a number of informative resources to help users of all levels.
- 
- Key Capabilities of SAS® Grid Computing**
This session shows you how to use various SAS applications running in a SAS Grid Computing environment.
- 
- SAS® Grid Manager: Meet Platform Computing**
Explore the SAS Alliance with a special focus on Platform Computing's partnership on the development of SAS Grid Manager.
- 
- Getting Started with SAS® Enterprise Guide®**
In this live webinar, technical experts from the SAS Customer Loyalty team will introduce you to SAS Enterprise Guide.
- 
- Getting Started with SAS® Hash Objects**
If hash objects confuse you, or if you're wondering whether learning about them is worthwhile, join us for this webinar.
- 
- New Features for SAS® Text Miner**
Hear details on the latest SAS Text Miner 12.1 product enhancements.
- 
- Best Practices for Configuring Your IO Subsystem for SAS®9**
Best practices for configuring your IO subsystem for SAS®9

Figure 11. Archived SAS Talks Webinars (continued)

**New Features for SAS® Enterprise BI Server**

SAS® SAS Product Manager Rick Styll reviews the new features and functions available in SAS Enterprise BI Server and SAS BI.

**Customer Segmentation Made Simple**

Join author and SAS® expert Randy Collica as he explains how to use SAS® Enterprise Miner™ and the most commonly available techniques for customer relationship management (CRM).

**Planned Installation? No Problem!**

In this session, our presenters will break down the deployment process for SAS 9.3, direct you to critical documentation and help you understand the steps necessary to meet (or even beat) your installation goals.

**Project Organization Proposal and Project Leadership Plan**

In this session, you'll discover an easy-to-use Project Organization Proposal (POP) that can be implemented without adding additional resources to the MIS or IT divisions.

**Time Series Data Mining with SAS® Enterprise Miner™**

Udo Sglavo from SAS R&D examines the benefit of considering the time dimension in SAS Enterprise Miner projects and how users will benefit from time series similarity analysis.

**An ODS Menu for All Appetites and Applications**

Chevell Parker from SAS Technical Support reveals how to harness the power of various ODS destinations to generate memorable applications and reports.

**Consider an Analytical Center of Excellence (and Other Ways to Create More Analytic Bandwidth)**

Anne Milley, Director of Analytic Strategy at JMP.

**Macros Made Easy (and More Efficient) with SAS® Enterprise Guide® 4.2 Prompts**

Kenneth Sucher, SAS Certified Instructor.

**Web Development with SAS® by Example**

SAS Press author Frederick Pratter will introduce you to some of the products and features available for creating Web content using SAS.

**Tips and Tricks for Finding SAS® Information**

Get tips and tricks to help you be more productive with your SAS software.

**New Goodies for the SAS® Programmer in SAS® Enterprise Guide® 4.3**

Chris Hemedinger, Senior Software Manager in SAS R&D, explores tools that help SAS programmers of all skill levels to create and maintain SAS programs with greater confidence and efficiency.

**SAS Web Report Studio Performance Improvement**

SAS Technical Architect Angela Hall will explain how to implement performance-improving mechanisms on your SAS system using SQL pass-through functionality.

**That's Not What I Meant: Adventures in Defining New Variables**

Statistics professor John Bailer will explore ways to confirm that you have correctly constructed or recoded variables, illustrating surprises that might arise when SAS® does what you said instead of what you meant.

**Feeding Output from PROC SUMMARY into a SAS®9 OLAP Cube**

SAS Regional Education Manager and Instructor Michelle Buchecker will teach you how to take your existing data sets and turn them into SAS®9 OLAP cubes.

**PROC REPORT Basics: Getting Started with the Primary Statements**

SAS® Certified Advanced Professional Art Carpenter will teach you how to use PROC REPORT to summarize and display your data more effectively.

**Visualization of Data and Models**

JMP's chief architect John Sall teaches you how to get meaningful visual analyses to answer your business questions.

Figure 11. Archived SAS Talks Webinars (continued)

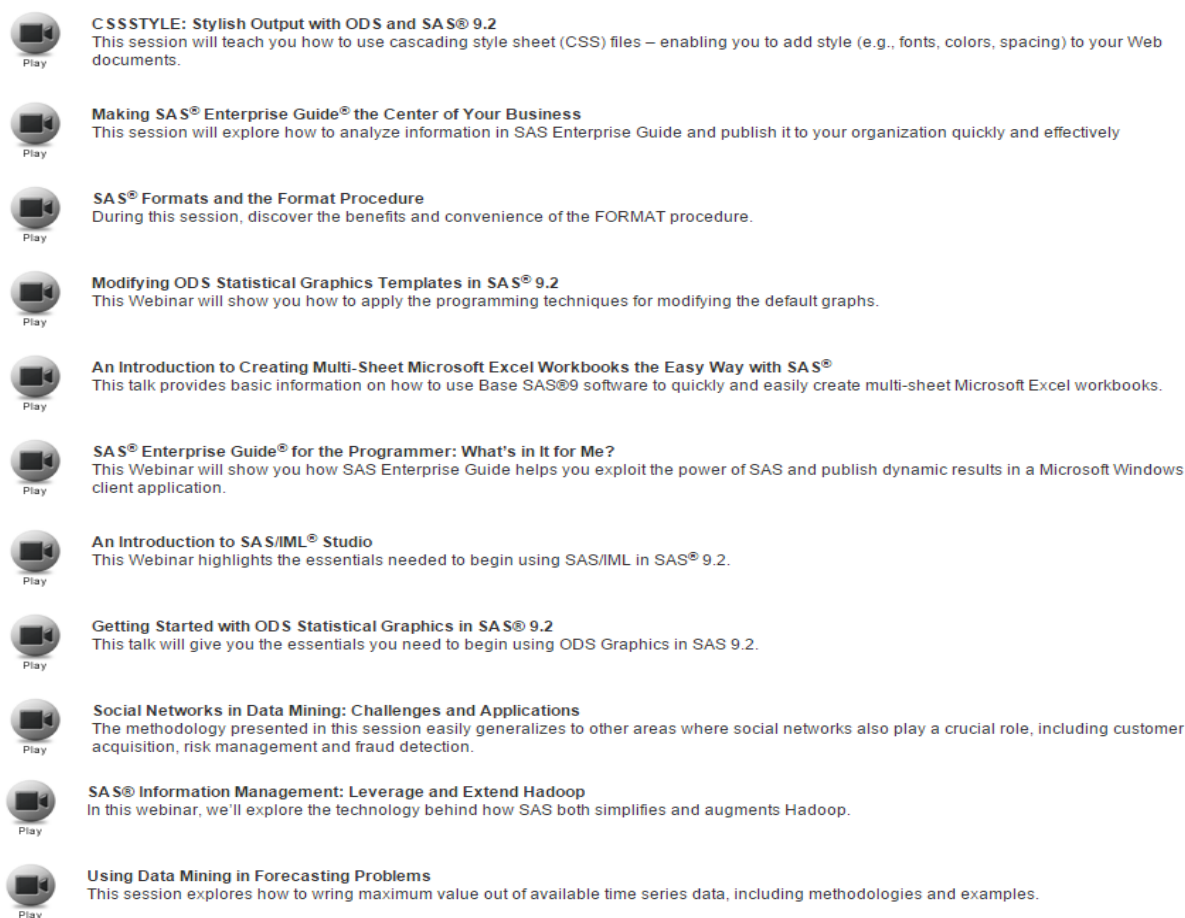


Figure 11. Archived SAS Talks Webinars (continued)

SAS YouTube Channel Videos

The SAS YouTube Channel Videos are available to all users and can be accessed at, <http://www.youtube.com/>. With more than 2,400 videos, the available video include: Analytics 2014, Featured SAS Customer Stories, SAS Customer Stories, SAS Visual Analytics, SAS Customer Intelligence, SAS Data Management, SAS High-Performance Analytics, Popular Uploads, and Created Playlists. The SAS YouTube Channel also provides access to various featured SAS channels, as shown in Figure 12, below.

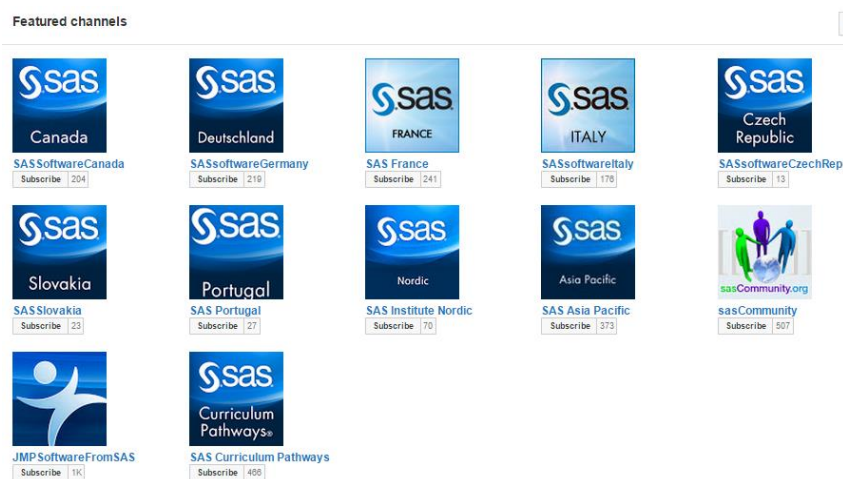




Figure 12. Featured SAS Channels

The SAS YouTube Channel supports a number of channels, as shown in Figure 13, below.

SAS Global Forum 2017


Check out live coverage from SAS Global Forum 2017, held April 2 - 5 at the Walt Disney Swan and Dolphin Resort in Orlando, Florida.





SAS Global Forum 2017 Opening Session
 SAS Software 
 Streamed 5 days ago • 1,152 views
 Watch live coverage of the Opening Session at SAS Global Forum 2017 at the Walt Disney World Swan and Dolphin Resort in Orlando Florida. The broadcast begins at 7:00 p.m. ET. ...


SAS Viya


SAS Viya is a single, cloud-ready environment that will serve everyone with the reliable, scalable, secure analytics management and governance essential for agile IT. Learn more at www.sas.com/viya





SAS Viya - Experience Your New Possible
 SAS Software 
 756 views • 2 weeks ago




What Is a Modern Analytics Environment?
 SAS Software 
 741 views • 6 months ago




Does It Make Sense to Have One Analytics Environment?
 SAS Software 
 283 views • 6 months ago





How Can IT Be Source of Agility and Provide Consistent...
 SAS Software 
 569 views • 11 months ago


SAS Customer Intelligence


Craft contextual customer interactions based on insights gleaned from big data and analytics. Measure and optimize the customer experience in both the digital and physical worlds. Learn more!





SAS Customer Intelligence 360 Discover - A Marketer's Overview
 SAS Software 
 771 views • 2 months ago




SAS Customer Intelligence 360 Engage - A Marketer's Overview
 SAS Software 
 546 views • 2 months ago




The Power of SAS: Analytic-driven Decisions for the Modern...
 SAS Software 
 79,613 views • 2 years ago





What Is Digital Marketing and Why It Matters - The SAS Point...
 SAS Software 
 146,635 views • 3 years ago


SAS Customer Stories


Hear dozens of SAS customers from across many industries explain how their businesses were able to achieve or exceed performance goals, discover new insights, improve revenues and more with the help ...





Humana - Accelerating Healthier Communities
 SAS Software 
 804 views • 8 months ago



The Umstead Hotel Enhances Revenue and Customer...
 SAS Software 
 586 views • 8 months ago



Smart Grid Management at Eandis
 SAS Software 
 894 views • 9 months ago




Old Dominion Electric Cooperative - Better Forecastin...
 SAS Software 
 634 views • 9 months ago

Figure 13. SAS Software YouTube Channels

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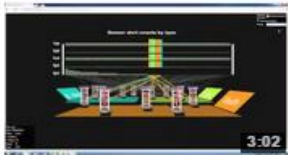
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Conclusion

As technology reaches for newer and greater horizons, many forward-thinking organizations, universities and degree-granting institutions are making some of their courses available to the masses around the world. The MOOC format allows courses and content to be freely taught by the best and brightest in open- and online learning environments to massive audiences. By delivering education in a MOOC format, anyone with a computer (workstation, laptop or “smart” device), an Internet connection and a web browser, can select or enroll in one of the many “free” courses currently being offered, learn from “real-time” or recorded lessons from the comfort of their living rooms, bedrooms, dorms, offices, beach houses, or anywhere else they are in the world. Needless to say, the availability of “free” resources along with the flexibility they offer has fostered a high degree of excitement, enthusiasm and an ever-growing audience for the MOOC format.

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