### **Differentiate Yourself**

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

#### **Abstract**

Today's employment and business marketplace is highly competitive. As a result, it is necessary for SAS® professionals to differentiate themselves from the competition. Success depends on a number of factors, including positioning yourself with the necessary technical skills in relation to the competition. This presentation illustrates how SAS professionals can acquire a wealth of knowledge and enhance their skills by accessing valuable and free web content related to SAS. With the aid of a web browser and an Internet connection, anyone can access published PDF papers, Microsoft Word documents, Microsoft PowerPoint presentations, student notes, instructor lesson plans, hands-on exercises, webinars, audios, videos, a comprehensive technical support website maintained by SAS, and more to acquire the essential expertise that is needed to cut through all the marketplace noise and begin differentiating yourself to secure desirable opportunities with employers and clients.

#### Introduction

As technology continues to reach for newer and greater horizons, it is becoming increasingly more important for students, professionals, and anyone with a curiosity for knowledge to have a way to continue their quest for learning. In a summary report on employment projections, the Bureau of Labor Statistics project that "nineteen of the 30 occupations projected to grow fastest from 2012 to 2022 will typically require some form of postsecondary technical education for entry."

In a 2012 report by ITCareerFinder.com the organization states, "A number of IT career paths will experience the most growth from 2012 to 2020 with pay salaries well above the national average and offer a wide range of opportunities for upward mobility." The fastest growing IT jobs from 2012 to 2020 according to the Bureau of Labor Statistics Occupational Outlook Handbook (2012-2013) are illustrated in Figure 1, below.

Number	IT Job	<b>Estimated Growth</b>	Average Salary
1	Mobile Application Developer	34%	\$94,000.
2	Database Administrator	33%	\$82,000.
3	Software Engineer / Developer	30%	\$90,000.
4	Video Game Designer	30%	\$80,000.
5	Network Administrator	28%	\$69,000.
6	IT Security Specialist	22%	\$87,000.
7	Computer Systems Analyst	22%	\$79,000.
8	Web Developer	22%	\$91,000.
9	Health Information Technician	21%	\$46,000.
10	Technology Manager	18%	\$111,000.

Figure 1. U.S Bureau of Labor Statistics Fastest Growing IT Jobs (2012 - 2020)

The future looks outstanding for SAS users too. In early 2015, SAS Institute announced on sas.com that, "The future looks very bright for SAS programmers, data analysts, analytic specialists, statisticians, and other SAS specialties in 2015 and beyond with demand projections expected to climb to higher levels." In another 2015 report by CNN Money, the employment outlook for SAS specialists is very bright indeed with median pay for SAS programmers to be upward of the \$90,000 range and an estimated 10-year job growth of 24.6%.

SAS Institute continues its steady growth by dominating in several "key" areas including the world of big data and data analytics. With 2015 Worldwide Revenue of \$3.16 billion (U.S.) and an R&D Investment of 25% of Revenue, SAS is in an enviable position as a top 10 software company. Having more than 14,000 employees located throughout the United States, Canada, Europe, Middle East, Africa, Asia Pacific and Latin America; and more than 80,000 business, government and university

customer sites in 146 countries, SAS software is used by 91 of the top 100 companies on the 2015 Fortune Global 500 List. It has even won the coveted "Best Place to Work" Awards two consecutive years, (2011 – 2012), and has taken the third and fourth spots in 2013 and 2014 respectively. Employees and users everywhere should be very excited about the future.

#### **Differentiate Yourself**

Anyone looking to stand out from the crowd and/or begin your rise to the top must learn how to differentiate themselves. But how is this accomplished? Invest in yourself. Take initiative. Pursue excellence in everything you do. Look for opportunities and, more importantly, make the most of every opportunity. Understand the impact of and, more importantly, how to leverage technology. Become involved by volunteering at your in-house, local, regional, special-interest and/or international SAS users group conferences and meetings. Become dedicated to something greater than oneself. These are just a few ways to stand out from the masses – make it happen.

#### Start by Taking Inventory of and/or Developing Your Skills

The Free Merriam-Webster Dictionary defines skill as, "the ability to do something that comes from training, experience, or practice." A skill must be developed – one isn't born possessing many desirable skills. So, how does one go about determining if they already possess a useful skill? Begin by taking inventory of any skills you might already possess – simply make a list. The list might look something like the following, see below.

# Inventory of Existing Skills DATA/PROC Step Programming Data Access Data Transformation Data Cleaning Data Manipulation ODS, Reporting and Specialized Output Macro Programming Statistical Analysis Data-driven Application Development User Interface Design Database Design Technical Writing

Now that you've taken inventory of your skills, assign a ranking to each skill using the following values.

# Ranking of Existing Skills 0 = None 1 = Heard of it, but little or no experience 2 = Some working knowledge 3 = Proficient 4 = Expert

Once you've assessed and ranked your skill level, assign a ranking to your level of competence using the following values.

## Identify Level of Competence 0 = None 1 = Out-of-date 2 = Competitive 3 = Cutting Edge

Finally, categorize your skills by functional discipline, as follows.

# Categorize Skills by Functional Discipline Requirements Analysis Systems Analysis Application Design User Interface Design Report, Table and Chart Design Data Cleaning SDLC Programming Statistical analysis Teaching Technical Writing Technical Support Debugging

#### **How to Develop and Improve Your Skills**

There are a number of ways for SAS users to develop and/or improve their skills. The following list identifies many popular methods SAS professionals have used to enhance their skills and, as a result, become more competitive.

	Popular Methods of Developing and Improving Skills
1)	Download, use and learn valuable techniques using the "free" SAS University Edition software
2)	Access the SAS Technical Support website at support.sas.com
3)	Download and use the "free" Online SAS documentation
4)	Access the published "White" papers on LexJansen.com
5)	Learn SAS techniques from user-written books from SAS Press
6)	Author / present at in-house, local, regional, special-interest and international SAS user groups
7)	Attend hands-on workshops, presentations and courses
8)	Volunteer at in-house, local, regional, special-interest and international SAS user groups
9)	Collaborate / Network with other SAS users
10)	Learn from self-paced web-based training
11)	Successfully pass one or more SAS Certification exams

To better understand what skills have the greatest impact to salaries, PayScale, Inc., a Seattle-based company, shares their list of skills, along with the percentage increase to the salaries, of SAS programmers, see below.

Skill	Percentage Increase		
UNIX	<u> </u>		
Linux	<u> </u>		
PL/SQL	<u> </u>		
Oracle	<u> </u>		
Windows Operating System	<u> </u>		
SQL	<u> </u>		
Statistical Analysis	<u> </u>		
Data Analysis	<u> </u>		
Microsoft Access	<u> </u>		
National Average	\$78,000		

 $Source: \ http://www.payscale.com/research/US/Job=SAS\_Programmer/Salary$ 

#### **How to Differentiate Yourself**

Being able to differentiate yourself from the competition is a meaningful activity that every SAS professional should consider. Although not comprehensive, the following list identifies a few popular methods that SAS professionals have shared with me to help them separate themselves from their competition.

#### Popular Methods of Differentiating Yourself from the Competition

- 1) Earn an Advanced Degree
- 2) Attend, Volunteer and Present at in-house, local, regional, special-interest and international SAS user groups
- 3) Share Your Knowledge with Colleagues
- 4) Read, Study and Learn from the published "white" papers on LexJansen.com
- 5) Access and Learn One New Technique Each Day from the Content on support.sas.com
- 6) Become SAS Certified (Base, Advanced, Clinical Trials, Predictive Modeler, Statistical Business Analyst, BI Content Developer, Visual Business Analyst, Data Integration Developer, Data Quality Steward, Platform Administrator)
- 7) Build Social Networking Connections on LinkedIn, Blogs, etc.

#### **Massive Open Online Content (MOOC)**

A MOOC is structured very similar to an online course. A MOOC typically is listed with a course/seminar/webinar 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 may even be able to receive a grade from the MOOC leader or instructor, just as if they had enrolled in a traditional course.

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. The MOOC format offers 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 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) SAS Technical Support website at support.sas.com
- 3) Online SAS Documentation in PDF and HTML format on support.sas.com
- 4) Published "White" Papers on LexJansen.com
- 5) SAS Press and SAS Talks Webinars
- 6) SAS YouTube Channel Videos
- 7) In-house and Local SAS Users Group meetings

#### **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 <a href="mailto:sas.com/universityedition">sas.com/universityedition</a>, see Figure 1, below.



#### 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' "World Class" Technical Support Website**

SAS' technical support website, <u>support.sas.com</u>, 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.

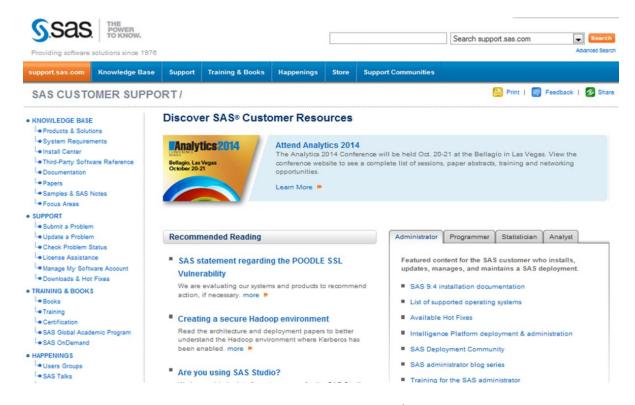


Figure 2. support.sas.com User Interface

#### 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 <a href="http://support.sas.com/software/">http://support.sas.com/software/</a>, illustrated in Figure 3, below.

#### **KNOWLEDGE BASE / SAS PRODUCTS & SOLUTIONS**

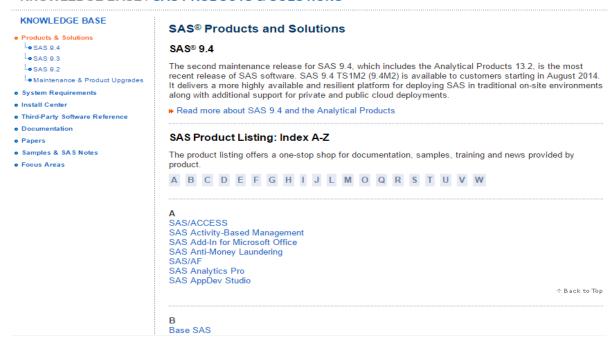


Figure 3. Knowledge Base - SAS Products and Solutions

#### 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.

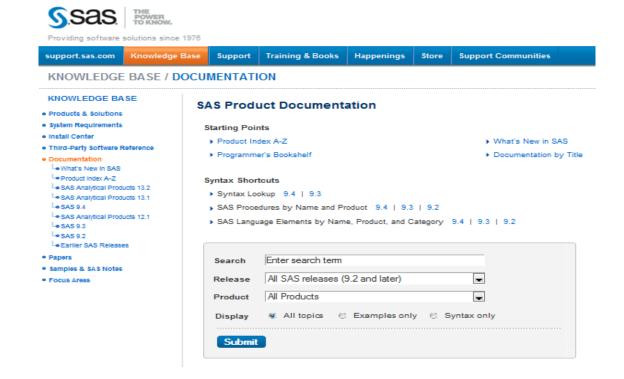


Figure 4. Knowledge Base – SAS Product Documentation

#### **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 <a href="http://www.lexjansen.com/">http://www.lexjansen.com/</a> 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.

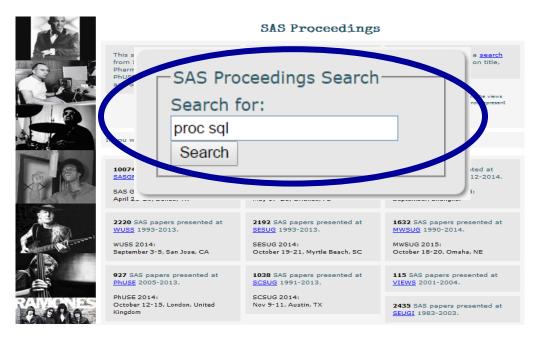


Figure 6. Built-in Google Search Applet in LexJansen.com

#### 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.

proc sql Search

About 5,270 results (0.27 seconds)

powered by Google™ Custom Search

#### Undocumented and Hard-to-find PROC SQL Features

www.lexjansen.com/nesug/nesug07/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/nesug/nesug12/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	Raing
2	Brave Head	177	Action Adventure	1995	Paramount Pictures	B
2	Calablanca	103	Drame	1942	MGM /UA	PG.
3	Christales Vecation	97	Conedy	1989	Warrer Brothers	PG-13
4	Conting to America	116	Conedy	1988	Paramount Pictures	R
5	Dracula	130	Horso	1993	Columbia TriStar	R
- 6	Oversed to Kill	105	Drawa Mysteries	1980	Filmwages Pictures	R
7	Forest Gueg	142	Droma	1994	Paramount Pictures	PG 13
8	Giroot	127	Dreme Romance:	1990	Perancurit Pictures	PG-13
9	Javes	125	Action Adventure	1975	Universal Studios	PG
10	Juvanic Park	127	Action	1993	Universal Pictures	P0-13
11	Lettal Weapon	110	Action Cape & Robber	1967	Warer Bothers	n
12	Michael	106	Drame	1997	Verlager Dirothers	PG-13
13	National Lampoon's Vacation	90	Coredy	1903	Waner Bothers	PG-13
-14	Pokesgeist	115	Heror	1982	MGM / UA	PG.
15	Rocky	120	Action Adverture	1976	MGM / UA	PG
16	Scarlace	170	Action Cope & Robber	1983	Universal Studios	R
17	Silence of the Lambs	118	Drama Suspense	1991	Drion-	R
18	Star Watt	124	Action Sci-Fi	1977	Luces Film Ltd	PG
19	The Hunt for Red October	135	Action Adventure	1989	Paramount Pictures	PG
20	The Terrinetor	108	Action Sci Fi	1984	Live Entertainment	Я
21	The Wood of Dr	101	Adverture	1939	MGM / UA	- 6
.22	Teanic	194	Downs 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

TRAINING & BOOKS

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, <a href="http://support.sas.com/publishing/bbu/webinar.html">http://support.sas.com/publishing/bbu/webinar.html</a>, as illustrated in Figure 9, below.

#### SAS Press» Webinars, Videos, and Podcasts SAS Press Webinars SAS Certification Books Upcoming Titles · Author Pages • Academics SAS Press Webinar Series Resellers Publish with SAS · Alex Dmitrienko, 2006 Kirk Lafler, 2006 Training Kirk Lafler, 2006 Certification · Jack Shostak, 2006 SAS Global Academic Program · Michael Raithel, 2006 SAS OnDemand 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

**Figure 9. SAS Press Webinar Series** 

View the archived presentation.

#### 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, <a href="http://support.sas.com/community/events/sastalks/#s1=2">http://support.sas.com/community/events/sastalks/#s1=2</a>, as illustrated in Figure 10, below.

#### HAPPENINGS / SAS TALKS



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 ondemand at, <a href="http://support.sas.com/community/events/sastalks/ondemand.html">http://support.sas.com/community/events/sastalks/ondemand.html</a>, as shown in Figure 11, below.

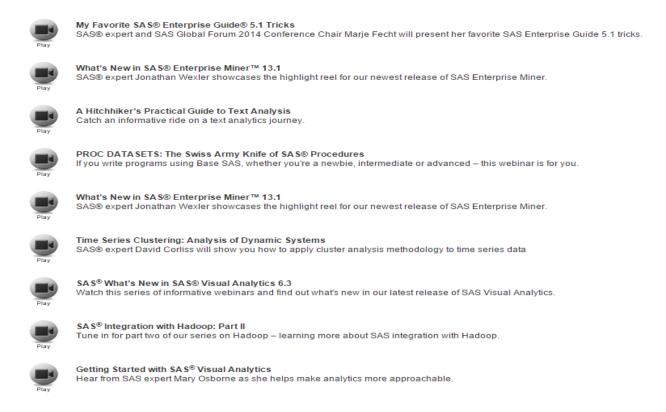


Figure 11. Archived SAS Talks Webinars



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 \$A\$® 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)

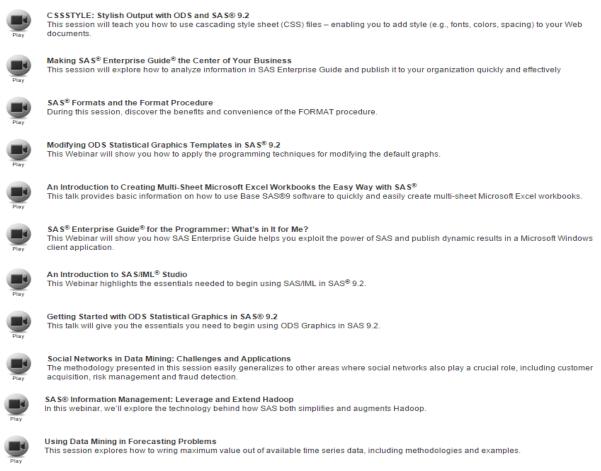


Figure 11. Archived SAS Talks Webinars (continued)

#### **SAS YouTube Channel Videos**

The SAS YouTube Channel Videos are available to all users and can be accessed at, <a href="http://www.youtube.com/">http://www.youtube.com/</a>. Available video channels 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.

#### Analytics 2014

Learn from visionary keynotes and insightful session speakers sharing real-world case studies and the latest trends and methodologies about analytics. Join hundreds of your peers to experience the best in career networking and professional development. Learn more about the Analytics 2014 series at...



SAS University Edition with Margo Stutesman by SAS Software 65 Views

by SAS Software 🖾 65 views 3 days ago



Time Series with David Corliss by SAS Software ☑ 32 views 3 days ago



Economists and Data
Scientists with Ken Sanford
by SAS Software 73 views
3 days ago



Analytics 2014 Shootout Competition by SAS Software 483 views 1 week ago

#### Featured SAS Customer Stories

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 of SAS solutions.



Aviva Gets the Full Picture When Disaster Strikes by SAS Software 46 views 3 days ago



Expedia Fights Fraud and Optimizes Inventory with... by SAS Software 721 views 3 years ago



Harrah's Hits Customer Loyalty Jackpot with SAS® by SAS Software 2,571 views 3 years ago



BCBSNC Partners with SAS to Improve Consumer... by SAS Software 190 views 2 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 of SAS solutions....



Aviva Gets the Full Picture When Disaster Strikes

by SAS Software 🖾 \* 3 days ago \* 46 views

Aviva has been proudly delivering prosperity and peace of mind to customers by building insurance products around the customer. Aviva uses SAS to meet the needs of its customer...



Oberweis Dairy: Milking the Most from Data

by SAS Software 2 . 1 month ago . 721 views

Oberweis Dairy learned there was more to ice cream sales than just a hot temperature. Using SAS, the Dairy leverages different data points to target the right customers at the right...



#### Maruti Suzuki Uses SAS to Drive Customer Satisfaction

See how SAS helps India's largest automobile manufacturer maintain their 45% market share and their J.D. Power #1 ranking for customer satisfaction in India. To learn more about SAS...



Federal Bank Customer Story

Federal Bank is meeting and exceeding expectations of target customers by delivering appropriate products and services. The bank is using SAS to meet the needs of customers,...

Figure 13. SAS Software YouTube Channels

#### **SAS Visual Analytics**

SAS Visual Analytics is a high-performance, in-memory solution for exploring any size of data very quickly. It enables you to spot patterns, identify opportunities for further analysis and convey visual results via Web reports, the iPad® or an Android tablet....



#### SAS Visual Analytics in the Cloud

by SAS Software III . 1 year ago . 71,758 views

Right-size your visual analytics discovery environment with the ultimate in deployment flexibility. Whether you prefer to deploy SAS Visual Analytics on-site on your hardware, in your private ... CC



#### SAS Visual Analytics Software Demo

by SAS Software a \* 2 years ago \* 47,299 views

Learn how SAS Visual Analytics lets you explore massive amounts of data at amazingly fast speeds..

CC



#### SAS® Visual Analytics - An Overview

by SAS Software III . 1 year ago . 24,565 views

Visually explore ALL your data and find answers to your toughest questions with easy-to-use analytics. Share your insight via Web and mobile devices. To learn more, visit... CC



#### SAS Visual Analytics Demo for Retail

by SAS Software 🖾 \* 1 month ago \* 850 views

Learn how to use SAS Visual Analytics to identify customer segments and do Market Basket Analysis Reporting. To learn more about SAS Visual Analytics, visit...

#### Analytics

SAS Analytics provide an integrated environment for predictive and descriptive modeling, data mining, text analytics, forecasting, optimization, simulation, experimental design and more. To learn more, visit http://www.sas.com/technologies/analytics/index.html



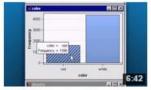
#### Power of Analytics - Jim Davis Explains

by SAS Software 🖾 153,915 views 3 years ago CC



#### Manage the Data Deluge with Data Mining and... by SAS Software 76,527 views

3 years ago CC



#### SAS® Enterprise Miner™ Software Demo

by SAS Software 2 32,084 views 2 years ago



### Manage All Unstructured

Data with SAS® Text... by SAS Software 24,251 views 3 years ago CC

#### SAS Customer Intelligence



The Power of SAS: Analyticdriven Decisions for the...

by SAS Software 🖾 282 views 3 days ago



Revenue Management: Big Data and RM Opportunities by SAS Software 2 101 views

3 weeks ago



Revenue Management: Big Data Requires New Analy... by SAS Software 📰 85 views

3 weeks ago



Revenue Management and **Big Data Analytics** 

by SAS Software 🖾 202 views 3 weeks ago

Figure 13. SAS Software YouTube Channels (continued)

#### SAS Data Management

SAS Data Management helps you analyze, improve and control data in one platform. The result? Better data governance. More collaboration between business and IT. And more consistent metadata and security services. It's as easy as it sounds. To learn more about SAS Data Management, visit...



Can you briefly describe the SAS Solution for Data... by SAS Software 152 views 1 month ago



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Visualizing of SAS® Even...
by SAS Software ■ 284 views
2 months ago



The 60-Second Scoop: SAS® Federation Server by SAS Software 2 241 views 2 months ago

#### SAS High-Performance Analytics

Today's top organizations are looking for optimal ways to gain insights from big data in shorter reporting windows. It's all about getting to the relevant data quicker. Revealing previously unseen patterns, sentiments and relationships. Delivering that information in real time. And speeding the time to insights,...



SAS High-Performance
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Jim Goodnight Talks About High-Performance... by SAS Software 45,939 views 2 years ago



SAS: High-Performance
Analytics Equals Fast
by SAS Software 134,141 views
2 years ago



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#### Popular uploads



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Power of Analytics - Jim Davis Explains 153,915 views 3 years ago



Discover New Opportunities with SAS Visual Analytics 144,299 views 1 year ago



SAS: High-Performance Analytics Equals Fast 134,141 views 2 years ago

#### Created playlists



Part of Something Bigger -SAS® EVAAS® for K-12

3 days ago



SAS Turkey 2 weeks ago



Featured SAS Customer Stories

2 weeks ago



SAS Executives Talk About SAS Data Management a...

1 month ago

Figure 13. SAS Software YouTube Channels (continued)

#### **Conclusion**

As technology continues to expand to newer and greater horizons, it is essential that students, professionals, and anyone with a curiosity for knowledge have a way to differentiate themselves from the crowd. The savvy SAS user accomplishes this by accessing the readily available MOOCs and videos with a computer (workstation, laptop or "smart" device), an Internet connection and a web browser, to learn techniques, tips, code examples, and other approaches from the comfort of their living room, bedroom, dorm, office, beach house, or countless other places in the world; downloading and using the "free" SAS University Edition software to learn data access, manipulation, programming, statistical, and reporting techniques; accessing a wealth of published conference "white" papers using lexjansen.com; and accessing technical content on support.sas.com.

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