SAS Programming Course
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Disclaimer:

The topics, thoughts, case studies etc. in the discussions are sole belongs to me and do not belong or represent organization where we work.

Agenda for today:

- Brief Introduction to Instructors and Program

- Introduction to SAS

- History of SAS

- SAS and Its Products

- SAS OnDemand for Academics

- SAS SUGI Papers

An Introduction to Instructors:

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Introduction to SAS:

SAS (Statistical Analysis System) Software is a powerful tool widely used in data analysis and statistical modeling across various industries. SAS caters to a wide range of users. Beginners can leverage its point-and-click interface, while experienced users can harness the power of SAS programming for in-depth analysis.

Versatility	**Statistical Analysis**	**Data Management**	**Programming Flexibility**
SAS offers a comprehensive suite of tools for data management, analytics, and visualization.	It provides a wide range of statistical techniques for exploring, analyzing, and interpreting data.	SAS enables efficient data manipulation, cleaning, and integration from multiple sources.	Users can employ SAS programming language for customized analyses and automation.

Scalability	**Reliability**	**User Community**
Whether handling small datasets or big data, SAS ensures robust performance.	With a long history and widespread adoption, SAS is known for its stability and accuracy in results.	Benefit from a large user community and extensive documentation for support and learning.

History of SAS:

A Seed of Statistics Blossoms: The History of SAS Software

SAS's roots trace back to the late 1960s at North Carolina State University. Initially, it was a project focused on agricultural data analysis. Led by Anthony Barr and James Goodnight, the software, then called the Statistical Analysis System, helped researchers understand the impact of factors like soil and weather on crop yields.

Throughout the 1970s, SAS primarily served agricultural departments. In 1976, it sprouted into an independent company, spearheaded by Goodnight and his colleagues. Since then, SAS has blossomed into a leading provider of data analysis software, used by a vast array of organizations, including Fortune 500 companies.

Origins	**Evolution**	**Milestones**	**Global Reach**	**Innovation**
• The history of SAS (Statistical Analysis System) traces back to the late 1960s when it was developed by North Carolina State University statisticians Jim Goodnight and John Sall, along with their colleagues.	• Initially, SAS was created to analyze agricultural data, but it rapidly expanded its scope to cater to various industries, including healthcare, finance, and government.	• SAS introduced groundbreaking statistical analysis tools, revolutionizing data processing and decision-making processes for businesses worldwide.	• Over the decades, SAS has evolved into a global leader in analytics software, serving thousands of organizations across more than 145 countries.	• Continuously innovating, SAS remains at the forefront of data analytics, empowering businesses to extract meaningful insights and drive strategic decision-making.

SAS and Its Products

SAS isn't just one program, but a suite of software products offering a vast array of data manipulation and analysis capabilities. Here's a breakdown of some key SAS products and their uses:

1. Base SAS: The foundation of SAS, Base SAS provides the core data management functionalities. You can import data from various sources, clean and transform it, and perform basic statistical procedures.

2. SAS/STAT: This is the powerhouse for statistical analysis. It offers a comprehensive library of procedures for tasks like hypothesis testing, regression analysis, and variance analysis.

3. SAS/GRAPH: Need to create impactful presentations or reports to showcase your findings? SAS/GRAPH lets you generate charts, graphs, and other visualizations to bring your data to life.

4. SAS/OR: Delve into the realm of operations research with SAS/OR. It provides tools for solving optimization problems like resource allocation and scheduling.

SAS and Its Products

- **SAS/ETS:** If you're dealing with time series data or econometric analysis, SAS/ETS offers specialized techniques for forecasting, trend analysis, and modeling economic relationships.

- **SAS/IML:** For those comfortable with a matrix programming language, SAS/IML allows for advanced statistical computations and custom algorithm development.

- **SAS Enterprise Guide:** This point-and-click interface provides a user-friendly way to access SAS functionalities without needing to write code. It's ideal for beginners or those who want a quicker way to explore data.

These are just a few examples, and SAS offers over 200 additional products catering to specific needs. From data mining (SAS/Enterprise Miner) to business intelligence (SAS 360 suite), there's a SAS product to tackle almost any data challenge you might encounter.

SAS OnDemand for Academics

- Product Page: https://www.sas.com/en_in/software/on-demand-for-academics.html

- Login Page: https://welcome.oda.sas.com/

SAS OnDemand for Academics is a game-changer for students, instructors, and independent learners. It provides free access to SAS® Studio, a cloud-based environment for learning data analysis and statistics.

Here's what SAS OnDemand for Academics offers:

- Free SAS Studio Access: Practice writing SAS programs, upload your own data (up to 5GB), and gain hands-on experience with real data analysis.

- Learning Resources: Supplement your learning with free video tutorials, e-learning courses (Programming 1 & Statistics 1), and an online community for peer interaction and support.

- Course Materials: Are you an instructor? SAS OnDemand for Academics provides free teaching materials and additional course data upload space to enrich your curriculum.

SAS SUGI Papers

Papers Home:

SAS SUGI papers stand as a valuable resource for anyone venturing into the world of SAS. SUGI, short for SAS Users Group International, is a community for SAS users. Every year, they host conferences where attendees present papers showcasing their SAS expertise. These papers, then compiled into SAS SUGI Proceedings, offer a wealth of knowledge on various SAS topics.

Here's what makes SAS SUGI Papers so beneficial:

- Diversity of Topics: Delve into a wide range of subjects, from fundamental SAS programming techniques to advanced analytics using specific SAS products.

- Practical Applications: Many papers address real-world scenarios, providing solutions and best practices for tackling common data analysis challenges.

- Code Examples: SUGI papers often include code samples, allowing you to see SAS concepts in action and learn by example.

- Insights from Experts: Gain valuable knowledge from experienced SAS users and enhance your own skills.

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Finding SAS SUGI Papers:

While SAS SUGI proceedings are copyrighted material, you can explore them through various avenues:

- SAS Support Website: SAS Support often provides access to select SUGI papers within their documentation sections for specific procedures or products.

- Third-Party Websites: Some websites, with permission from SAS, might offer summaries or excerpts from relevant SUGI papers.

- SAS Global Forum Proceedings: Look into papers presented at SAS Global Forum, another major SAS user conference, which might address similar topics.

By leveraging SAS SUGI Papers, you can embark on a continuous learning journey, expanding your SAS knowledge and unlocking the full potential of this powerful data analysis software.

Hands-on Session

- Account Creation
- Login
- Data Upload/Download
- Roaming Around the Environment

Thank You.

Have a Question:

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