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**Russell Lavery**  
**Apt 524 1030 E. Montgomery Ave.**  
**Bryn Mawr, PA 19010**



### Summary

I have over twenty years' experience using SAS on both windows and UNIX machines. I have both built, and managed, data marts as well as created and managed production reports produced from those data marts. I have presented over sixty papers at SAS conferences/universities and companies all over the US, in Europe and China. I have won three best paper awards and one of my talks, with my voice, was burned onto a CD and is included in the back of Art Carpenter's book on Proc Report. I am one of sixty "SAS Partners" in the North East section of the US.

### Skill Summary

Twenty years of SAS Experience. Excellent SAS skills (including macros and macro quoting). Excellent SQL skills. Familiar with: Clustering, Logistic Regression, Neural Nets, Decision Trees  
I was a technical reviewer for a data mining book that will be published by SAS press.  
I have experience with many kinds of healthcare data.

As a director of research at a consulting firm, I designed research for new and existing products. Examples are:

- \* Interviewed clients to develop business issues and then created research plans to address the issues.
- \* Responsible for survey concept, writing, programming, statistical analysis & report writing.
- \* Performed logistic regressions, perceptual mapping, factor, cluster analysis and other multivariate techniques.  
One of my predictive models increased a client's response by 40% over their previous year campaign.
- \* Improved my companies conjoint based "market share simulation" and brought game theory into pricing analysis.

Designed, programmed and managed data marts, using SAS to extract data from multiple sources.  
I have used DB2 and Teradata.

I can communicate complex ideas clearly. Examples are:

- \* As manager of patient satisfaction studies at a major hospital, I have presented to C level management.
- \* I have won three best paper awards at SAS conferences

I can create actionable analysis. Examples are:

- \* Our patients satisfaction questionnaire had been written by a national consulting firm (Press Ganey). I invented a new analysis that was more actionable than Press Ganey's. My idea was adopted as national standard.
- \* Improved my companies conjoint based "market share simulation" and brought game theory into pricing analysis.
- \* Identified the cause for a drop in Emergency Room patient satisfaction and, knowing this, management was able to enact simple measures to fix the problem.

MBA in Quantitative Methods: Additional Training: all courses for PhD in Marketing with Minor in Statistics.  
I have taught Statistics and Operations Research on the Undergraduate, Masters and PhD Level.

### Work Experience: I have been a SAS consultant since 2000

- \* Currently studying for two SAS Certification exams: Predictive Modeler & Statistical Business Analyst
- \* I am a technical reviewer for a SAS Press book: "Beyond Basic Statistics: Fundamentals of Data Mining with JMP"

Consultant at: Blue Cross of Tennessee	6/2012 to 6/2012
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SAS V9.3 (Enterprise Miner connecting to SAS on Unix machine)  
\*Created documentation for files & created one series of reports using billing data.

Consultant at: GlaxoSmithKline. Analytics Department	5/2011 to 6/2012
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SAS V9.1 (Base/SQL/Connect/Macro) – On Windows XP Pro and Unix  
\* Created 20 file data mart using SAS – 90% of departmental reporting is done from this data mart.  
\* Created custom reports for management using IMS data.

Consultant at: K&L consulting Services Inc. Analytics Department of CRO	6/2010 to 12/2010
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SAS V9.1 (Base/SQL/Connect/Macro) – On Windows XP Pro  
\* Designed and wrote productivity macros and programmed 100 Adam QC checks  
\* Taught SAS Macros for a startup CRO in Nanjing China.

Consultant at: Schering Plough: Global Market Analytics Department	4/2005 to 6/2010
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SAS V8 & V9 (Base/SQL/Connect/Macro) – On Windows XP Pro and Unix  
 \* Manipulated commercial pharmaceutical data- IMS & Wolters Kluwer RX data for a variety of projects.  
 \* Investigated how physician change of address influenced stability of geographically based reports.  
 \* “baby-sat” UNIX server(monitored CPU/disk usage & worked with Root to assign groups/privileges)

Wrote seven papers for NESUG 2004, Pharmasug 2005 and SUGI 2005	7/2004 to 4/2005
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\* I presented seven papers at NESUG 2004. T  
 \* Created and delivered pre-conference CDISC training for SUGI 2005.

Consultant at: Sanofi-Synthelabo: Phase III Clinical Trials Programming	4/2002 to 6/2004
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SAS V8 & V6 (Base/SQL/Connect/Macro) – On Windows NT, VAX and Unix.  
 \* Programmed Phase III submission to FDA (files to be submitted to FDA, tables, Listings and E-sub).

Consultant at: Bristol-Myers Squibb: Statistical Experiments & Modeling	1/2/2001 to 8/3/2001
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SAS V8 & V6 (Base/ Stat/ ETS/SQL/QC/Connect/Graph/Macro/ Access) – On Windows NT and Unix  
 \* Manipulated commercial pharmaceutical data-used SAS to extract/manipulate data from IMS Rx files  
 \* Created SAS QC Charts to identify physicians for whom BMS was losing share.  
 \* Used SAS to target physicians to be invited to Medical Education events.  
 \* Used SAS for ARIMA modeling and non-linear regression to model response to sampling & detailing  
 \* Used SAS to create control groups for marketing experiments  
 \* Modeled calendar effects (effects of holidays, weekends and months with 4 vs 5 weekends) on sales.

Consultant at: First U.S.A: Created documentation for SAS programs	11/2000 to 12/2000
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SAS V8 & V6 (Base/Connect) Access. – On Windows NT and Unix  
 \* Modified SAS programs to reflect changing business procedures. Documented files and programs.

Consultant at: Smith-Kline Beecham (marketing): Ad Hoc SAS programming	5/1/2000 to 7/30/2000
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SAS V8 & V6 (Base/ Stat/SQL/Connect/ Access) – On Windows NT and Unix  
 \* Created an algorithm to merge files with poorly matching key fields and to perform Discriminant Analysis

Milliman & Robertson, Radnor PA, SAS Programmer	9/1999 to 3/2000
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Milliman & Robertson is a Consulting Firm specializing in Health Care Actuarial Services  
 \* Programmed in SAS and created documentation for undocumented programs.

PNR and Associates, Jenkintown PA, Director, Research and Analysis	2/1998 to 6/99
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PNR is a Consulting Firm specializing in Econometrics and Market Research SPSS on Windows NT  
 \* Responsible for survey concept, writing, programming, statistical analysis & report writing.  
 \* Performed logistic regressions, perceptual maps, factor, cluster analysis and other multivariate techniques.  
 \* Performed sample size calculations and designed experiments

Christiana Care Health System, Wilmington DE, Manager, Market Research	9/1996 to 2/1998
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Christiana Care Health System is a Tertiary Care Hospital System  
 SPSS -On Windows NT, SAS V6 (Base/Macro/Graph ) -On Windows 98  
 \* Responsible for patient satisfaction surveys and custom surveys.  
 \* Invented a graphical method for presenting Patient Satisfaction Data, and setting management goals, that focused management attention on areas that  
 1) needed improvement and 2) could be improved.  
 My method was superior to the method in use by the national consulting house that did our analysis.  
 The consulting house adopted my method.  
 \* Converted reporting system from three-week "manual & SPSS" process to an automated, two-day SAS process.  
 \* Presented results to CEO and high-level management groups.

<b>Papers Presented and Professional Activities</b>
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### Events Chaired

Co-organizer of the PhUSE Single Day Conference in Philadelphia on August 11, 2011

Section Chair for NESUG 2006

### Published Work

Books: A 2 1/2 hour talk (with voice) is on a CD sold as part of Art Carpenter's book on PROC Report.

### SAS/Statistical Presentations at Conferences, and companies

Presented at: SUGI, NESUG, SESUG, WUSS, Phila SUG, NJSUG, DCSUG, NYASUG, Baltimore SUG, Maine SUG the Philadelphia University SAS Training Program as well as private companies in the US and China

Won a "Best Paper" award (Latent Cluster Analysis in SAS) at PhUSE 2011 in Brighton Beach, UK

Won a "Best Paper" award (Knowing SQL Internals makes SQL Easy) at PhUSE 2008 in Manchester, UK

"Best Contributed Paper" (The SQL Optimizer Project: \_Method and \_Tree in SAS9.1) at SUGI30(2005)- Phila. PA.

**STATISTICS:** *In addition to the talks below, I taught pre-conference statistics training at MWSUG and PharmaSUG.*

An Intro. to Market Segmentation

Latent Cluster Analysis in SAS (*best paper award*)

An Intro to Poisson Regression

Decision trees in SAS Enterprise Miner and JMP

Matching of Test & Controls

Intro to Neural Nets

The Logic of Hypothesis Testing

An Intro to Proc UCM

The Logic of One-Way ANOVA

The Logic of Interactions & 2Way ANOVA

The Logic of Regression

Proc Power: V9.1 (With Debbie Bauer)

The Logic of Statistical Power

The Logic of the CMH

The Logic of the Fisher's Exact test

**CDISC:** *In addition to talks below, I taught pre-conference CDISC training at PharmaSUG 2008 and SUGI 2005*

Relationships among CDISC variables: Timing Variables

Relationships among CDISC variables: The ORRES cascade

Relationships among CDISC variables: Relating Data sets

**MACROS:** *In addition to talks below, I taught pre-conference macro training at PharmaSUG, WUSS and BASUG*

The Map of the SAS Macro System

SAS Macro Quoting

How %Str and %NRStr Work

**LARGE FILE TECHNIQUES:** (These are "Speed Merging" or "Table Lookup" techniques)

The Amazing SQL Optimizer (*best paper award*)

Knowing SQL Internals makes SQL Easy (*best paper award*)

A Comparison of Speed Merging Techniques

Format Table Lookups

Key Merging and \_IORC\_

SAS Resource Usage for Common Procs

Version 9 Hashing

A Parallel Processing Primer (V9.1)

Key-indexing, Bitmaps & V8 Hashing

The SAS 9.1 SPDE Data Engine

Hash Tables as Programming Tools

A Day of SQL- Basics to Tricks

**BASE SAS:**

Proc Report

Proc Transpose

Proc Summary

The Data Step Debugger

SAS Arrays

Put and INput functions

Using Proc Tabulate and Proc Summary to Validate SAS Code

Comparing files without Proc Compare

A Program to Read Information in SAS Headers and Produce Reports for Programming Managers

### Education

MBA in Quantitative Methods - Drexel University, Philadelphia PA

B.S. in Management Engineering: Worcester Polytechnic Institute, Worcester Mass.

In addition, I have taken over ten courses from SAS Institute.