

Nathaniel Derby

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OBJECTIVE

Applied statistician, specializing in time-series forecasting, seeking business consulting opportunities.

EDUCATION

University of Washington, Seattle, WA.

June 2004: M.S. in statistics, emphasis on time series analysis and forecasting.

Humboldt-Universität zu Berlin, National Research Center on the Quantification and Simulation of Economic Processes, Berlin, Germany.

September 1998 - May 2000: Visiting Fulbright Scholar for economics and statistics.

Pomona College, Claremont, CA.

May 1997: B.A. in mathematics cum laude.

Budapest Semester in Mathematics, Budapest, Hungary.

Spring 1996: Coursework in discrete mathematics.

WORK EXPERIENCE

For further details, see also PUBLICATIONS and SOFTWARE.

Statistician and Co-Founder, Stakana Analytics, January 2008 - present.

Wrote various SAS and Excel programs, built and updated various statistical models. Managed this statistical/computing consulting business. See CONSULTING EXPERIENCE for details.

Statistician, Washington Mutual, Credit Risk/Retail Analytics, Seattle WA, March 2006 - November 2007.

Designed and implemented a SAS software tool to process, report on, and analyze various loan portfolios. Also produced statistical trend analyses of real estate prices, proposed methods for comparing risk ratings from different portfolios, gave a short course on basic statistics, and developed a strategy for forecasting a variety of economic time-series data. Built a SAS software tool to automatically update CD rates in a database.

Statistician, T-Mobile, Resource Planning Department, Bellevue WA, July 2004 - October 2005.

Designed, implemented and managed the progress of a SAS software tool to analyze and forecast call center call volume. This included conducting ongoing meetings with users, writing ongoing documentation, and giving periodic presentations to executives. Also supervised an undergraduate intern and performed related various statistical analyses.

Quantitative Analyst, Princeton Brand Econometrics, New York, NY, April 2001 - September 2001.

Developed sample frames, managed questionnaire data, and developed/assessed statistical methods for forecasting market shares.

Researcher and Programmer, German Institute for Economic Research, Berlin, Germany, May 1999 - May 2000.

Researched imputation methods for the German Socio-Economic Panel and developed a computer program to implement nonparametric regression.

SAS Programmer, University of Pittsburgh, Epidemiology Data Center, Pittsburgh, PA, Summer 1998.

Wrote SAS programs to analyze data from a nationwide clinical trial assessing the health of caregivers of Alzheimer's patients.

Operations Research Analyst, Bureau of Labor Statistics, Washington, DC, Summer 1997.

Wrote computer programs, developed statistical methodology, and analyzed data for the BLS Customer Service Survey (CSS).

CONSULTING EXPERIENCE

Experiences from 2008 on are through the auspices of Stakana Analytics. For further details, see also *Selected Consulting Reports*.

Fabric Worldwide, Seattle, WA, April 2010 - present.

Contributed analytics ideas to this startup marketing technology company.

Revenue Management Systems, Inc., Seattle, WA, November 2009 - present.

Developed optimization and forecasting models for an airline revenue management software system.

Looking Glass Analytics, Olympia, WA, January 2009 - October 2009.

Researched, wrote and tested a macro to provide estimates and confidence intervals for indirect and direct age-adjusted incidence rates.

QL2 Software, Seattle, WA, December 2008.

Consulted about estimating values between data collection times.

Hybrid Data Systems, Seattle, WA, August 2007 - March 2008.

Consulted on various statistical computing projects.

Clarisonic, Bellevue, WA, Summer 2006.

Consulted on various statistical details of a clinical trial.

University of Washington, Statistical Consulting Service, Seattle, WA, January 2004 - May 2004.

Consulted on various small statistical projects from the university community.

TEACHING EXPERIENCE

University Instructor, University of Washington, Seattle, WA, Summer 2008 and 2009.

Taught accelerated courses in Probability I (STAT 394) and Probability II (STAT 395). Each covered ten week's worth of material in four weeks. Teaching materials, including a message board, were maintained through class websites at nderby.org/stat394.html and nderby.org/stat395.html.

Pre-Conference Seminar Instructor, Pacific Northwest SAS Users Group, Midwest SAS Users Group and Western Users of SAS Software Conferences, Seattle WA, Cleveland OH and Universal City CA/San Jose CA, Fall 2008 and 2009.

Taught a four-hour seminar on generating custom-formatted Excel output from SAS, using a variety of methods. Prepared the syllabus and all teaching materials.

Conference Workshop Instructor, Pacific Northwest SAS Users Group, Seattle, WA, September 2008.

Gave a workshop on creating customized worksheet formats with my SAS macro, `exportToXL`, as detailed in my conference paper of the same name as listed under *Conference Proceedings*.

University Teaching Assistant, University of Washington, Seattle, WA, September 2001 - May 2004.

Taught quiz sections of Elements of Statistical Methods (STAT 311), Case-Based Social Statistics (STAT 321), and Experimental Design (STAT 421). Also provided computing support for the faculty, students and staff.

Instructor, Johns Hopkins University, Center for Talented Youth, Site in Frederick, MD, Summers 2000 and 2002.

Designed and taught courses in Mathematical Excursions and Mathematical Reasoning. Taught the individually-paced mathematics sequence.

Teaching Assistant, Johns Hopkins University, Center for Talented Youth, Site in Los Angeles, CA, Summers 1995 and 1996.

Assisted the teaching of the individually-paced mathematics sequence.

OTHER EXPERIENCE

Computing:

Math/Stat Software: LaTeX, Maple, R, S-plus, SAS (Base, STAT, ETS, IML, DDE, macros), SPSS.

Database: Business Objects, Basic SQL.

Programming: C, Java, HTML.

Communication: Made numerous presentations to technical and nontechnical audiences, in academic and business settings. See also **TEACHING EXPERIENCE** and **SELECTED PAST AND UPCOMING PRESENTATIONS**.

Management: Currently managing an intern at Stakana Analytics. Co-chaired the 2009 Pacific Northwest SAS Users Group Conference, on the executive committees of the Pacific Northwest, Puget Sound and Vancouver (Canada) SAS Users Groups. Managed two major projects (at Washington Mutual and T-Mobile) under time and budget constraints and coordinated them with users and executives.

Languages: Fluent in German (earned the *Zertifikat Deutsch* from the Goethe-Institut in 1997, lived in Germany a combined total of 2.5 years), proficient in French and Spanish.

HONORS AND AWARDS

- 10/13/09 Best contributed paper for SAS 101, Midwest SAS Users Group Conference, Cleveland, OH.
- 10/13/09 Best contributed paper for tutorials and solutions, Midwest SAS Users Group Conference, Cleveland, OH.
- 9/27/09 Academic chair, Pacific Northwest SAS Users Group Conference.
- 9/1/09 Invited speaker, Western Users of SAS Software Conference, San Jose, CA.
- 6/3/09 Best contributed paper for applications development, Pharmaceutical Industry SAS Users Group Conference, Portland, OR.
- 3/22/09 Invited speaker, SAS Global Forum, Washington, DC.
- 11/5/08 Invited speaker, Western Users of SAS Software Conference, Universal City, CA.
- 9/22/08 Invited speaker, Pacific Northwest SAS Users Group Conference, Seattle, WA.
- 3/19/08 Best contributed paper for reporting and information visualization, SAS Global Forum, San Antonio, TX.
- 10/19/07 Best contributed paper for data presentation and business intelligence, Western Users of SAS Software Conference, San Francisco, CA.
- 2001-2003 VIGRE recipient, National Science Foundation, Alexandria, VA.
- 1998-1999 Fulbright Scholar, Fulbright Commission, New York, NY and Bonn, Germany.
- 1997 Inducted into Sigma Xi, the Scientific Research Society.
- 1996-1997 Pomona Scholar (GPA of 3.67 out of 4), Pomona College, Claremont, CA.
- 1995-1996
- 1993-1994

MEMBERSHIPS

Member of the American Statistical Association, Executive Committees of the Vancouver (Canada), the Puget Sound and the Pacific Northwest SAS Users Groups.

SELECTED PAST AND UPCOMING PRESENTATIONS

- 11/17/10 "Introduction to PROC SQL," Vancouver SAS Users Group Meeting, Vancouver, BC, Canada.
- 11/16/10 "Introduction to PROC SQL," Victoria SAS Users Group Meeting, Victoria, BC, Canada.
- 11/3/10 "Graphing a Progression of Time Series Plots" and "Using Recursion for More Convenient Macros," Western Users of SAS Software Conference, San Diego, CA.
- 8/5/10 "The Rising Tide of Statistics in Business," Joint Statistical Meetings, Vancouver, BC, Canada.
- 4/11/10 "Getting Correct Results from PROC REG," SAS Global Forum, Seattle, WA.
- 11/13/09 "A Little Stats Won't Hurt You" and "Time Series Forecasting Methods," Edmonton SAS Users Group Meeting, Edmonton, AB, Canada.
- 11/12/09 "Generating Custom-Formatted Excel Output from SAS" and "Time Series Forecasting Methods," Calgary SAS Users Group Meeting, Calgary, AB, Canada.
- 10/25/09 "A Little Stats Won't Hurt You" and "Getting Correct Results from PROC REG," SouthEast SAS Users Group Conference, Birmingham, AL.
- 10/11/09 "Generating Custom-Formatted Excel Output from SAS," "A Little Stats Won't Hurt You" and "Getting Correct Results from PROC REG," Midwest SAS Users Group Conference, Cleveland, OH.
- 9/27/09 "A Little Stats Won't Hurt You" and "Getting Correct Results from PROC REG," Pacific Northwest SAS Users Group Conference, Portland, OR.
- 9/1/09 "A Little Stats Won't Hurt You" and "Getting Correct Results from PROC REG," Western Users of SAS Software Conference, San Jose, CA.
- 5/31/09 "A Little Stats Won't Hurt You" and "Creating Your Own Worksheet Formats in exportToXL," Pharmaceutical Industry SAS Users Group Conference, Portland, OR.
- 3/22/09 "A Little Stats Won't Hurt You" and "Creating Your Own Worksheet Formats in exportToXL," SAS Global Forum, Washington, DC.
- 11/18/08 "Importing Data from Excel into SAS" and "Generating Custom-Formatted Excel Output from SAS," Whitehorse SAS Users Group Meeting, Whitehorse, YT, Canada.
- 11/6/08 "An Optimal Way to Import Excel Worksheets into PC SAS" and "Creating Your Own Worksheet Formats in exportToXL," Western Users of SAS Software Conference, Universal City, CA.
- 10/20/08 "An Optimal Way to Import Excel Worksheets into PC SAS" and "Creating Your Own Worksheet Formats in exportToXL," SouthEast SAS Users Group Conference, St. Pete Beach, FL.
- 10/8/08 "PROC REG . . . and Its Discontents," Vancouver SAS Users Group Meeting, Vancouver, BC, Canada.
- 10/7/08 "Time Series Forecasting Methods," Victoria SAS Users Group Meeting, Victoria, BC, Canada.
- 9/23/08 "An Optimal Way to Import Excel Worksheets into PC SAS" and "Creating Your Own Worksheet Formats in exportToXL," Pacific Northwest SAS Users Group Conference, Seattle, WA.
- 6/13/08 "Populating Custom Excel Spreadsheets: The DDE Way," Toronto Area SAS Society, Toronto, ON, Canada.
- 4/17/08 "Forecasting Methods for Call Centers," University of Washington Undergraduate Mathematical Sciences Seminar, Seattle, WA.
- 3/16/08 "Revisiting DDE: An Updated Macro for Exporting SAS Data into Custom-Formatted Excel Spreadsheets" (Parts I and II) and "Guidelines for Organizing SAS Project Files," SAS Global Forum, San Antonio, TX.
- 10/17/07 "Revisiting DDE: An Updated Macro for Exporting SAS Data into Custom-Formatted Excel Spreadsheets" (Parts I and II) and "Guidelines for Organizing SAS Project Files," Western Users of SAS Software Conference, San Francisco, CA.

PUBLICATIONS

Articles in Books

Derby, N. (2000), "Teachware quantlets," in *XploRe Learning Guide*, edited by W. Härdle, S. Klinke and M. Müller, Berlin, Germany: Springer Verlag, pp. 147-165.

Conference Proceedings

Derby, N. (2010), "Getting Correct Results from PROC REG," *Proceedings of the 2010 SAS Global Forum, Proceedings of the 2009 Midwest SAS Users Group Conference (best paper), Proceedings of the 2009 Pacific Northwest SAS Users Group Conference, Proceedings of the 2009 SouthEast SAS Users Group Conference and Proceedings of the 2009 Western Users of SAS Software Conference.*

Derby, N. (2009), "A Little Stats Won't Hurt You," *Proceedings of the 2009 SAS Global Forum, Proceedings of the 2009 Pharmaceutical Industry SAS Users Group Conference, Proceedings of the 2009 Midwest SAS Users Group Conference (best paper), Proceedings of the 2009 Pacific Northwest SAS Users Group Conference, Proceedings of the 2009 SouthEast SAS Users Group Conference and Proceedings of the 2009 Western Users of SAS Software Conference.*

Derby, N. (2009), "Creating Your Own Worksheet Formats in exportToXL," *Proceedings of the 2009 SAS Global Forum, Proceedings of the 2009 Pharmaceutical Industry SAS Users Group Conference (best paper), Proceedings of the 2008 Pacific Northwest SAS Users Group Conference, Proceedings of the 2008 SouthEast SAS Users Group Conference and Proceedings of the 2008 Western Users of SAS Software Conference.*

Derby, N. (2008), "An Optimal Way to Import Excel Worksheets into PC SAS," *Proceedings of the 2008 Pacific Northwest SAS Users Group Conference, Proceedings of the 2008 SouthEast SAS Users Group Conference and Proceedings of the 2008 Western Users of SAS Software Conference.*

Derby, N. (2008), "Revisiting DDE: An Updated Macro for Exporting SAS Data into Custom-Formatted Excel Spreadsheets: Part I – Usage and Examples", *Proceedings of the 2008 SAS Global Forum (best paper), Proceedings of the 2007 Pacific Northwest SAS Users Group Conference and Proceedings of the 2007 Western Users of SAS Software Conference (best paper).*

Derby, N. (2008), "Revisiting DDE: An Updated Macro for Exporting SAS Data into Custom-Formatted Excel Spreadsheets: Part II – Programming Details", *Proceedings of the 2008 SAS Global Forum, Proceedings of the 2007 Pacific Northwest SAS Users Group Conference and Proceedings of the 2007 Western Users of SAS Software Conference.*

Derby, N. (2008), "Guidelines for Organizing SAS Project Files," *Proceedings of the 2008 SAS Global Forum and Proceedings of the 2007 Western Users of SAS Software Conference.*

Selected Consulting Reports

Derby, N. (2010), "Simulated Event Analytics," Fabric Worldwide.

Derby, N. (2010), "Preliminary Analysis of [Redacted] Data," Fabric Worldwide.

Derby, N. (2010), "Analytics Ideas," Fabric Worldwide.

Derby, N. (2010), "Forecasting Method Assessment," Revenue Management Systems, Inc.

Derby, N. (2009), "Forecasting Methods for Airline Revenue Management," Revenue Management Systems, Inc.

Derby, N. (2009), "Age-Adjusted Rates, Confidence Intervals and Statistical Tests for Various Projects at Looking Glass Analytics," Looking Glass Analytics.

Derby, N. (2008), "Determining Size of [Redacted]," QL2 Software.

Derby, N. (2008), "Statistical Testing for Effectiveness in VIN Campaigns," Hybrid Data Systems.

Derby, N. (2006), "Data Analytical Observations," Clarisonic.

- Derby, N. (2006), "Time Series Modeling and Forecasting," Washington Mutual.
- Derby, N. (2005), "Analysis of Interval Call Volume," T-Mobile.
- Derby, N. (2005), "Effect of X on Y Call Volume" [several reports, where X is a variable or event and Y is a call category], T-Mobile.
- Derby, N. (2005), "Analysis of SIVR Data," T-Mobile.
- Derby, N. (2004), "ARIMA Forecasting," T-Mobile.
- Derby, N. (2004), "Simple Univariate Forecasting Techniques," T-Mobile.
- Derby, N. (2004), "References for Forecasting Call Center Call Volume," T-Mobile.
- Derby, N. (2003), "Derivation of the Gini Index," University of Washington Statistical Consulting Service.
- Derby, N. (2001), "Notes on Analyzing Data for Forecasting Market Shares," Princeton Brand Econometrics.
- Derby, N. (2000), "Notes on Various Imputation Techniques Employed on the European Community Household Panel," German Institute for Economic Research.
- Derby, N. (1999), "Spline Functions," German Institute for Economic Research.
- Derby, N. (1997), "Statistical Tests for Analyzing CSS Cross-Tabulations," Bureau of Labor Statistics.
- Derby, N. (1997), "Estimation Methodology for Analyzing Cycle 4 CSS," Bureau of Labor Statistics.

Manuscripts

- Derby, N. (2010), "Suggestions for Organizing SAS Code and Project Files," updated and expanded from the 2007 version below, online at www.nderby.org/publications.html.
- Derby, N. (2009), "Generating Custom-Formatted Excel Output from SAS," seminar materials at the Calgary SAS Users Group Meeting (Fall 2009), the Midwest SAS Users Group Conference (2009), the Western Users of SAS Software Conference (2008, 2009), the Pacific Northwest SAS Users Group Conference (2008) and the Whitehorse SAS Users Group Meeting (Fall 2008).
- Derby, N. (2009), "Probability Course Notes," course notes for the Summer 2009 accelerated Probability I/II (STAT 394/395) courses, University of Washington.
- Derby, N. (2008), "Getting Started with \LaTeX on Microsoft Windows," online at www.nderby.org/publications.html.
- Derby, N. (2007), "Suggestions for Organizing SAS Code and Project Files," online but updated in 2010 (above).
- Derby, N. (2004), "Assessing the Detrended Fluctuation Analysis Method of Estimating the Hurst Coefficient," Master's Thesis, Department of Statistics, University of Washington.
- Derby, N., W. Härdle and B. Rönz (1999), "The Three Dimensions of Multimedia Teaching of Statistics," Discussion Paper no. 76, Sonderforschungsbereich 373, Humboldt-Universität zu Berlin, Germany.

SOFTWARE

Freeware

exportToXL, exportToXL.sf.net, completed September 2007.

A SAS macro to export data from PC SAS onto custom-formatted Excel spreadsheets using Dynamic Data Exchange. It works on all versions of PC SAS, Excel and Windows – but notably not on any version of SAS running off of a server.

exportFromXL, exportFromXL.sf.net, completed September 2008.

A SAS macro to facilitate exporting data from Excel spreadsheets into SAS using Dynamic Data Exchange. It works on all versions of PC SAS, Excel and Windows – but notably not on any version of SAS running off of a server.

Client Software

Age-Adjustment Macro, Looking Glass Analytics, completed October 2009.

A SAS macro that calculates crude and age-adjusted rates for a given set of variables, using both the direct and indirect method of age-adjustment. It also calculates confidence intervals for all of these rates.

Rate Update Tool, Washington Mutual, completed November 2007.

A SAS program and macros to read rates from Excel spreadsheets and enter them into a centralized database.

Portfolio Tool, Washington Mutual, completed July 2007.

A SAS program and macros to process, analyze and report on various loan portfolios, given an “as-of” date and a type of loan. This included querying an Oracle database, incorporating a third-party software, building a SAS data library (for related smaller projects), performing basic statistical analyses and exporting the results onto formatted Excel templates.

Forecast Tool, T-Mobile, completed October 2005.

A SAS program and macros to validate, process, analyze, report and forecast call center call volume, given a set of call categories and a forecast horizon. A few different statistical forecasting methods were employed – the program chose forecasts from the method that best forecasted over a test time interval, and a measure of accuracy of the winning method was displayed. Numerical and graphical output were in Excel and PDF formats.