Kristen Kotter

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EDUCATION

Master of Arts, Economics *6/2006*
Vanderbilt University, GPA: 3.6/4.0
Graduated the Outstanding Student of the Year

Bachelor of Science with Honors, Finance, Minor: Biological Anthropology *12/2004*
University of Illinois at Urbana-Champaign, GPA: 3.7/4.0
Exchange Student at **Australian National University**, spring 2003

THESIS

Title: A model of technical inefficiency effects of military spending in a stochastic frontier for panel data of OECD countries
Advisor: Professor Cliff Huang

ACADEMIC HONORS and ACTIVITIES

Graduate:

- Elected by Economics department professors as the Outstanding Student of the year

Undergraduate:

- Phi Kappa Phi National Honor Society
- Stephen B. Hahn Scholarship
- Alpha Kappa Psi philanthropic and professional business fraternity
- Alpha Lambda Delta National Honor Society
- Beta Gamma Sigma Honor Society
- Dean's List all semesters at UIUC except for spring 2003 (Australian exchange) and fall 2004

High School (not exhaustive):

- Senior Valedictorian of approximately 200 students

GRADUATE RESEARCH PROJECT EXPERIENCE

- Utilized SAS, Mathematica, and STATA extensively for applied regression analysis to ascertain various relationships between variables including the direct and indirect effects of military spending on growth, the effects of age and gender on wages, etc.
- Estimated efficiencies of banks in Taiwan using Stochastic Frontier and Data Envelopment Analysis for comparison
- Appraised projects using cost-benefit analysis to calculate the net present values of those projects for comparison in concurrence with general microeconomic theories of consumer and producer surplus
- Programmed specific economic systems for analysis including: profit maximization, estimation of various demand forms, Nash Equilibriums, and Monopolies to name a few

WORK EXPERIENCE

Department of Biostatistics, Vanderbilt University Medical Center, Nashville, TN
Biostatistician I *5/2007 to present*
Research Projects and Experience (not exhaustive):

- POEM
  - Parse unstructured datasets:
    - Investigate generalizable patterns among unstructured TIU notes to write Perl code that parses the relevant fields of a pre-specified data model
    - Use detailed knowledge of specific datasets to discuss with collaborators revisions of data model and adjust code to meet these revisions
    - Once data model for TIU notes was finalized, creating reproducible Perl code that alters the parsed data according to knowledge and desires of the doctors such as:
      - Reformat free text section of notes so that the new output distinguishes between line feeds inserted by the author versus those that were a product of the system
      - Determine how the notes are patterned according to original documents and addendums to create a pseudo-link between associated documents
      - Tag sections of the notes into different categorizations according to which type of template that particular line would fall into and how it would affect the results section of the pre-built mayo parser application that ultimately gives positive, negative, and neutral assertions to the medical concepts
  - Write creative code for managing NSQIP structured dataset
    - Discuss and understand the randomization process for the NSQIP dataset and write the corresponding Perl code to randomize the dataset on a case-level as well as a patient-level.
      - Run descriptive statistics so inferences could be made about how well they were balanced.
    - Reformat data, create analysis variables, and import into SQL Server 2005 database
  - Co-create code that merged massive unstructured doctor notes with the structured NSQIP gold-standard dataset via a crosswalk and produce pre-filtering statistics that ultimately determine crosswalk linking problems, the percentage of nursing documents, the size of the documents to be parsed, etc..
  - Write computationally-intensive code that creates PSI dataset through a restructuring of the gold-standard, procedure-level NSQIP data into a specific episode-level format needed for Boston's pre-built application
    - Co-create algorithm to deal with "good" matches, "bad" matches, etc. between the PTF files and the NSQIP data to maintain the integrity of the data while shaping NSQIP data into "episodes" based on Boston's definition of an "episode"

- CDA/Blood Pressure Project
  - Use fill-date information on specific blood pressure drugs to write an extensive Perl code that creates the adherence proportion (used as dependent variable in the analysis) for specific patients based on the exact days those patients were on blood pressure drugs within the 183 days
    - Incorporate censoring into this calculation based on Robert et al's definition of censoring such that days after the patients' death were not included in the calculation as well as those determined to have "left" the system based on pre-specified criteria
    - Test and confirm the logic and reproducibility of the script by applying the calculation to another date range
    - Test the logic of the original algorithm which put more weight on those patients who missed drugs towards the "end" of the interval in question by writing a comparison script that would weigh missed drugs evenly across the interval which was used in a sensitivity analysis

- DECIDE Grant
  - Use advanced programming techniques to write efficient code that incorporates data from different sources such as the Medicare (Virec) data as well as VA sources to determine whether specific patients should be excluded from the analysis based on their associations with particular medications, ICD9 Procedure codes, ICD9 Diagnosis codes, and/or CPT procedure codes at an inpatient or outpatient level within a pre-specified time period

CEPI, Vanderbilt University, Nashville, TN
Research Assistant, Part-time *1/2006 – 6/2006*
Biostatistician I *6/2006 – 3/2007*

- Programmed in SAS, STATA, and Mathematica for statistical analysis of cross-sectional and longitudinal databases and graphics
- Employed various macros and SAS procedures, like Proc SQL, Proc Freq, and Proc Tabulate for easy management of data
- Interfaced SAS with Access, Excel to produce databases and ad hoc reports
- Utilized advanced SAS techniques such as Proc Mixed and Proc GLM for initial analysis of data
- Interpreted analysis for discussion with colleagues and wrote initial drafts of descriptive statistics sections

Department of Economics, Vanderbilt University, Nashville, TN
Graduate Student Assistant, Part-time *1/2005 – 2/2006*

- Co-designed the department brochure
- Ran a lot of miscellaneous, administrative type of errands

Kotter Ready Mix Inc and Kotter Dock Inc, Metropolis, IL
Accounting Clerk *Seasonal, 1999-2004*

- Managed special projects such as coordination of historical data for auditing purposes
- Maintained accounts payables utilizing accounting software and addressed discrepancies
- Coordinated concrete orders with customers for delivery utilizing computerized batching equipment
- Designed and Maintained Kotter Dock website

City National Bank, Metropolis, IL
Account Representative Intern *6/2002-8/2002*

- Provided solutions and information to account inquiries for up to 50 clients daily
- Analyzed questionable checks for discrepancies and identified potentially fraudulent transactions

RESEARCH GRANTS (Department of Biostatistics, Vanderbilt School of Medicine)

CRCoE - 04-CRCOE-002 (Griffin) *10/01/04 - 09/30/09*
$2,000,000
Tennessee Valley VA Clinical Research Center of Excellence
VA Clinical Research Center of Excellence, VA Clinical Research Scholar
This grant provides salary support for junior faculty at the Tennessee Valley Healthcare Facility.
Role: Biostatistician

VA TRP 03-073 (Speroff) *10/01/03 - 9/30/08*
$750,000
Center for Patient Healthcare Behavior
As part of the HSR&D capacity building Targeted Research Enhancement Program (TREP). Our TREP is established to develop the Center for patent Healthcare Behavior. Our operative definition of "patient Healthcare Behavior" includes all patient behavior related to modifying health status at any point along the continuum of health care, ranging from prevention to chronic care.
Role: Biostatistician

CURRENT COMPUTER SKILLS and CERTIFICATIONS

- SAS Certified Base Programming Credential (Certified 2006)
- R, SAS, STATA, and Eviews – for applied statistical analysis
- Mathematica – for extensive mathematical programming
- Perl – for parsing, management, and manipulation of data
- Microsoft Access, Excel, and Powerpoint
- Frontier and DEAP–for efficiency and productivity analysis
- MS SQL Server 2005
- Linux and Windows -operating systems

CONTINUING EDUCATION

Certified Training for MS SQL Server 2005 by Chester Flake at CED Solutions	2007
Regression Modeling Strategies by Frank Harrell at Vanderbilt University	2007
Generalized Linear Models: Theory and Applications at Joint Statistical Meetings	2008
Bayesian Methods and Software for Data Analysis at Joint Statistical Meetings	2008
Nonparametric Modeling in SAS Software at Joint Statistical Meetings	2008
An Introduction to Bayesian Analysis using SAS Software at Joint Statistical Meetings	2008
Working towards Master of Arts in Mathematics with Applied focus from Vanderbilt	expected 2010/2011

INTRAMURAL ACTIVITIES

- Department of Biostatistics Satisfaction Survey, CQI Project led by Robert Greevy
    - Write perl script that pulls out names of department members to maintain anonymity of collaborators and department members
- Improving Recycling Access and Usage, CQI Project
    - Serve as starting point for recycling access needs or ideas within the department

RECENT PHILANTHROPIC ACTIVITIES

Maggie's Miracle-Volunteer teaching for autistic 10-year old	9/2006-5/2007
Nashville Metro Animal Control- volunteer for homeless animals	8/2007-present
Rescued a death row dog and fostered until found good home	7/2008-8/2008

ACADEMIC SOCIETY MEMBERSHIP

American Statistical Association