Kendall Giles

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EDUCATION

Ph.D.   Computer Science, Johns Hopkins University, May 2007
M.S.   Computer Science, Johns Hopkins University, May 2004
M.S.   Information Systems, Virginia Commonwealth University, August 2002
M.S.   Electrical Engineering, Purdue University, May 1993
B.S.   Electrical Engineering, Virginia Tech, May 1991

ACADEMIC AND INDUSTRY EXPERIENCE

2009 – 2009   Senior Research Scientist, Machine Translation and Information Extraction, Summer Camp for Applied Language Exploration (SCALE), Human Language Technology Center of Excellence (HLTCOE), Johns Hopkins University, Baltimore, Maryland, June-August 2009

2008 –   Assistant Professor, Department of Statistical Sciences and Operations Research, Virginia Commonwealth University, Richmond, Virginia

2008 – 2009   Associate Staff Scientist, Human Language Technology Center for Excellence (HLTCOE), Johns Hopkins University, Baltimore, Maryland

2007 – 2007   Faculty Mentor for Research in Industrial Projects for Students (summer research program); Fellow for Mathematics of Knowledge and Search Engines (fall research workshop), Institute for Pure and Applied Mathematics, University of California – Los Angeles, Los Angeles, California

2006 – 2007   Visiting Assistant Professor, Department of Mathematics, College of William and Mary, Williamsburg, Virginia

2005 – 2006   Adjunct Instructor, Department of Mathematics, College of William and Mary, Williamsburg, Virginia

2002 – 2006   Research Assistant, Department of Applied Mathematics and Statistics, Johns Hopkins University, Baltimore, Maryland

2001 – 2005   Senior Systems Engineer, Raytheon, Falls Church, Virginia

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1998 – 2001	Adjunct Instructor and Graduate Teaching Assistant, Department of Information Systems, Virginia Commonwealth University, Richmond, Virginia
1996 – 2001	Senior Software Engineer, Orion's Arrow, Madison, Wisconsin
1992 – 1996	Software Engineer, GE Medical Systems, Milwaukee, Wisconsin

EXTERNAL FUNDING

1. A Hierarchical and Iterative System for the Analysis of Streamed Text Data, Human Language Technology Center for Excellence, Baltimore, Maryland, May–September 2008, $7,512, PI.
2. The Design and Implementation of a System for Fusion and Inference from Multiple Disparate Data Sources, Johns Hopkins University, June 2009–May 2014, $102,560, PI.

PUBLICATIONS

1. Bryson, K., K. Giles, and B. Kositanurit. "Exploration of a Hybrid Feature Selection Algorithm," Journal of the Operational Research Society, 54:7, 790-797, 2003.
2. Osei-Bryson, K. and K. Giles. "An Exploration of a Set of Entropy-Based Hybrid Splitting Methods for Decision Tree Induction," Journal of Database Management, 15:3, 2004.
3. Osei-Bryson, K. and K. Giles. "Splitting Methods for Decision Tree Induction: An Exploration of the Relative Performance of Two Entropy-Based Families," Information Systems Frontiers Journal, 8:195-209, Springer, 2006.
4. Giles, K. "Knowledge Discovery in Computer Network Data: A Security Perspective," Ph.D. Dissertation, Johns Hopkins University, Baltimore, Maryland, October 2006.
5. Fishkind, D., C. Priebe, K. Giles, L. Smith, and A. Aksakalli. "Disambiguation Protocols Based on Risk Simulation," IEEE Transactions on Systems, Man, and Cybernetics, Part A, 37:5, 814-823, September, 2007.
6. Giles, K., M. Trosset, D. Marchette, and C. Priebe. "Iterative Denoising," Computational Statistics, Accepted for Publication, September 2007.

UNDER REVIEW

1. Solka, J., C. Priebe, N. Tukey, and K. Giles. "Association Discovery Via Iterative Denoising With User Driven Regeometrization," submitted to Journal of Computational and Graphical and Statistics, 2009.

REFEREED CONFERENCE AND TECHNICAL REPORT

1. Um, D., B. Stankovic, K. Giles, T. Hammond, and V. Lumelsky. "A Modularized Sensitive Skin for Motion Planning in Uncertain Environments," Proceedings of the 1998 IEEE International Conference on Robotics and Automation, Leuven, Belgium, May 1998.
2. Giles, K., K. Bryson, and Q. Weng. "Comparison of Two Families of Entropy-Based Classification Measures with and without Feature Selection," HICSS (Hawaii International Conference on System Sciences), Wailea Maui, Hawaii, January 2001.

3. Bryson, K., and K. Giles. "Attribute Discretization for Classification," Proceedings of AMCIS 2001 (Americas Conference on Information Systems), Boston, Massachusetts, August 2001.
4. Bryson, K. and K. Giles. "Splitting Methods for DT Induction: A Comparison of Two Families," Proceedings of AMCIS 2002 (Americas Conference on Information Systems), Dallas, Texas, August 2002.
5. Giles, K., D. Marchette, and C. Priebe. "A Backscatter Characterization of Denial of Service Attacks," 2003 Proceedings of the American Statistical Association, Statistical Computing Section [CD-ROM], Alexandria, Virginia: American Statistical Association, 2003.
6. Giles, K., D. Marchette, and C. Priebe. "On the Spectral Analysis of Backscatter Data," Proceedings of the Hawaii International Conference on Statistics, Mathematics, and Related Fields, 2004.
7. Giles, K., D. Marchette, and C. Priebe. "The Development and Exploration of Online Classifiers for Backscatter from Denial of Service Attacks," 2004 Proceedings of the American Statistical Association, Statistical Computing Section [CD-ROM], Alexandria, Virginia: American Statistical Association, 2004.
8. Giles, K., D. Marchette, and C. Priebe. "A Model of Backscatter as Escher Tessellations," 2005 Proceedings of the American Statistical Association, Statistical Graphics Section and Section on Statistics in Defense and National Security [CD-ROM], Alexandria, Virginia: American Statistical Association, 2005.
9. Giles, K., M. Trosset, D. Marchette, and C. Priebe. "Fast Iterative Denoising," Technical Report No. 653, Department of Applied Mathematics and Statistics, Johns Hopkins University, Baltimore, Maryland, December 2005.
10. Giles, K., D. Marchette, C. Priebe, and D. Waagen. "Iterative Denoising of Computer Network Application Traffic," Technical Report No. 655, Department of Applied Mathematics and Statistics, Johns Hopkins University, Baltimore, Maryland, November 2007.

PRESENTATIONS
INVITED
1. "Y2K: Where will you be on 12/31/1999?" Invited Presentation to the Society of Advancement of Management, Virginia Commonwealth University, Richmond, Virginia, April 1999.
2. "An Introduction to Google's PageRank," Mathematics of Knowledge and Search Engines research program, University of California, Los Angeles, Institute for Pure and Applied Mathematics, Los Angeles, California, September 2007.
3. "Basics of Knowledge Discovery Engines," Mathematics of Knowledge and Search Engines research program, University of California, Los Angeles, Institute for Pure and Applied Mathematics, Los Angeles, California, September 2007.
4. "Scan Statistics on Enron Graphs," Mathematics of Knowledge and Search Engines research program, University of California, Los Angeles, Institute for Pure and Applied Mathematics, Los Angeles, California, October 2007.

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5. "Iterative Denoising: A Flexible (and applicable to bioinformatics?) Knowledge Discovery Methodology," Bioinformatics Colloquium, George Mason University, Manassas, Virginia, February 2008.
6. "Communication in Industry: Lessons Learned the Hard Way," Lecture Presentation to STAT/OR 490: Communications in Statistics and Operations Research, Virginia Commonwealth University, Richmond, Virginia, April 2008.
7. "Knowledge Discovery with Iterative Denoising," Seminar, Computer Science Department, Virginia Commonwealth University, Richmond, Virginia, October 2008.
8. "Consulting Experiences," Panel Discussion, STAT/OR 490 Communications in Statistics and Operations Research, Virginia Commonwealth University, Richmond, Virginia, March 2009.
9. "Knowledge Discovery with Iterative Denoising," BINF739 Text Data Mining in Bioinformatics, Department of Bioinformatics and Computational Biology, George Mason University, March, 2009.

OTHER

1. "Engineering and the Globalization of Markets," Opening and Closing Remarks of Engineers' Week Panel Discussion, Panel: Scott Sink, Charles Pryor, Alberto Grinspun, and Eugene Justice, Moderator: Magdolna Csath, Virginia Tech, Blacksburg, Virginia, February 1990.
2. "The Use of PV-WAVE for Vessel Edge Detection," GE Medical Systems, Milwaukee, Wisconsin, December 1992.
3. "The Benefits of an Industry Internship," School of Electrical and Computer Engineering, Purdue University, West Lafayette, Indiana, 1994.
4. "Mobile Robots," School of Mechanical Engineering, University of Wisconsin-Madison, Madison, Wisconsin, 1997.
5. "E-commerce in a Digital World," with Carmel Vacarre, ITEC '99 (an information technology industry trade show), Richmond, Virginia, October 5 and 6, 1999.
6. "Robotics, E-commerce, and LEGO Mindstorms: The Value of Virtual Community," Information Systems Department, Virginia Commonwealth University, Richmond, Virginia, March 14, 2000.
7. "Falsifiability and the Nolan Stage Hypothesis," a seminar based on a working paper by Allen Lee and Kendall Giles, Information Systems Department, Virginia Commonwealth University, Richmond, Virginia, September 29, 2000.
8. "Data Mining: Decision Tree Induction and Feature Selection Algorithms," Richmond-Tidewater Chapter of INFORMS Fall Kick-off Meeting, Defense Supply Center Richmond, Richmond, Virginia, October 19, 2000.
9. "Comparison of Two Families of Entropy-Based Classification Measures With and Without Feature Selection," with Kweku-Muata Bryson, Hawaii International Conference on System Sciences (HICSS) 2001, Maui, HI, January 5, 2001.
10. "Data Mining," Annual Graduate Faculty Meeting, MCV Campus, Virginia Commonwealth University, Richmond, Virginia, April 10, 2001.
11. "Attribute Discretization for Classification," with Kweku-Muata Bryson, AMCIS 2001 (Americas Conference on Information Systems), Boston, Massachusetts, August 2001.

12. "Towards the Use of Iterative Denoising for Biological Data Exploration," 2007 Summer Research Conference, Southern Regional Council on Statistics, Richmond, Virginia, June 2007.
13. "Text Analysis with Iterative Denoising," International Biometric Society, Eastern North American Region (ENAR), Arlington, Virginia, March 2008.
14. "Interactive Text Analysis with Iterative Denoising," Interface 2008, Text Data Analysis Session, Durham, North Carolina, May 2008.

TEACHING
COURSES TAUGHT
Spring 2008
1. STAT 544: Statistical Methods II.
2. STAT 691 (now STAT /OPER 736): Mathematics of Knowledge and Search Engines.

Fall 2008
1. STAT 543: Statistical Methods I.
2. STAT 541: Applied Statistics for Engineers and Scientists.

Spring 2009
1. STAT 541: Applied Statistics for Engineers and Scientists.
2. STAT 541: Applied Statistics for Engineers and Scientists.

CURRICULUM DEVELOPMENT
1. Created STAT/OPER 736.
2. Created syllabus for STAT 321 Introduction to Statistical Computing.
3. Modified STAT 544.
4. Modified STAT 543.
5. Modified STAT 541, including video lectures and podcasts.
6. Created lecture "Communication in Industry: Lessons Learned the Hard Way" for STAT/ OPER 490: Communications in Statistics and Operations Research, April 2008.

GRADUATE STUDENT
1. Advisor for Masters student Bao-Tran Nguyen (Statistics).

INSTITUTIONAL SERVICE
JOURNAL REVIEWER AND CONFERENCE REFEREE
1. Journal of Statistical Computation and Simulation (JSCS).
2. INFORMS Journal on Computing (JOC).
3. Journal of Computational and Graphical Statistics (JCGS).
4. Journal of Biomedicine and Biotechnology (JBB).
5. Americas Conference on Information Systems (AMCIS).
6. Hawaii International Conference on System Sciences (HICSS).

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SELECTED HONORS AND AWARDS

1. Engineering Study Abroad Scholarship (Switzerland and Germany), Virginia Tech, Blacksburg, Virginia, 1990.
2. Litton Industries Scholarship, 1990–1991.
3. Association of Old Crows Scholarship, 1988–1989.
4. C.T. Tate University Distinguished Co-op Award, (Co-op Employer: CIA, 1987–1990), Virginia Tech, Blacksburg, Virginia, 1991.
5. Virginia's Center for Innovative Technology (CIT) Award, $2,500.00, 1999.
6. Graduate Teaching Assistantship Award, Virginia Commonwealth University, Richmond, Virginia, 1998–2001.
7. Dean's Scholar, School of Business, Virginia Commonwealth University, 2002–2003.
8. Full Tuition and Research Assistantship, Department of Computer Science and Department of Applied Mathematics and Statistics, Johns Hopkins University, 2002–2006.
9. Mu Sigma Rho Statistics Honor Society, April 2008.

PROFESSIONAL MEMBERSHIPS

1. American Statistical Association (ASA)
2. Institute for Electrical and Electronic Engineers (IEEE)
3. SIGMA XI (Scientific Research Society)
4. Association for Computing Machinery (ACM)
5. Virginia Academy of Sciences (VAS)