Kendrick Boyd

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RESEARCH INTERESTS

- Evaluation techniques for supervised machine learning, particularly thresholdless evaluation measures such as ROC curves and precision-recall curves
- Statistical relational learning methods and applications, espeically in biology and medicine

EDUCATION

Ph.D. in Computer Sciences **2010-2014**
University of Wisconsin-Madison – Madison, WI
Thesis: Mitigating the Risks of Thresholdless Metrics in Machine Learning Evaluation.
Distributed minor: genetics, statistics, and epidemiology.
Advisor: Dr. C. David Page.

M.S. in Computer Sciences **2008-2010**
University of Wisconsin-Madison – Madison, WI

B.A. in Math-Computer Science **2003-2008**
B.M. in Bassoon Performance
Lawrence University – Appleton, WI
Summa cum laude.

RESEARCH EXPERIENCE

Research Assistant **2009-present**
University of Wisconsin-Madison – Madison, WI
Perform independent research on precision-recall curves, differentially private machine learning evaluation, and applications of statistical relational learning for breast cancer prediction. Advisor: Dr. C. David Page.

Research Experience for Undergraduates Participant **summer 2006**
University of California, Santa Cruz – Santa Cruz, CA
Investigated in-flight data management for cache coherence in distributed storage systems. Advisor: Dr. Carlos Maltzahn.

Summer Research Assistant **summer 2005**
Lawrence University – Appleton, WI
Constructed an 8-node cluster from spare parts and configured and installed Fedora, DNS, DHCP, NFS, Ganglia, and MPI. Advisor: Dr. Joseph Gregg.

PUBLICATIONS

Boyd K, Eng K, Page CD. Area under the Precision-Recall Curve: Point Estimates and Confidence Intervals. *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases*, 2013.

Boyd K, Costa VS, Davis J, Page CD. Unachievable Region in Precision-Recall Space and Its Effect on Empirical Evaluation. *International Conference on Machine Learning*, 2012.

OTHER WORK EXPERIENCE

Teaching Assistant, CS 302 **2008-2009**
University of Wisconsin-Madison – Madison, WI
Led lab sections, held office hours, and graded assignments for an Introduction to Programming course in Java.

Software Development Intern **summer 2007**
QuotePro – Chicago, IL
Worked in a small team to translate business logic and user interface code from Visual FoxPro to Visual Basic 6.

Grading Assistant, Math 150 **spring 2006**
Lawrence University – Appleton, WI
Graded assignments for a Calculus II course.

TECHNICAL SKILLS

	Advanced	Proficient	Familiar
Programming languages:	Java, C/C++	Python, PHP	VB6, Perl, OCaml
Databases:	SQL queries	MySQL admin	Microsoft Access
Data analysis:	R	Matlab	
Operating systems:	Linux	Windows	
Typesetting:	LaTeX		

PROFESSIONAL SERVICE

Reviewer, PLOS ONE Journal **2013-present**
Reviewer, Machine Learning Journal **2012-present**
Program Committee Member, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases **2013-2014**
Reviewer, International Joint Conference on Artificial Intelligence **2013**

SELECTED ACADEMIC HONORS AND FINANCIAL SUPPORT

Trainee, Computation and Informatics in Biology and Medicine **2009-2012**
Recipient, Alumni Scholarship **2008-2009**
Recipient, Edwin N. and Ruth Z. West Scholarship **2004-2008**
Inductee, Pi Kappa Lambda (musical achievement honor society) **2008**
Inductee, Phi Beta Kappa (liberal arts and sciences honor society) **2006**
Finalist, National Merit Scholarship **2003**

PERSONAL INTERESTS

Bassoonist, Middleton Community Orchestra **2010-present**
Other: reed making, downhill skiing, reading