

Finn Kuusisto

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RESEARCH

My research is in machine learning and data mining, with applications in medicine. In particular, my work focuses on medical applications of uplift modeling, breast cancer prediction and overtreatment, adverse drug events, and personalized medicine.

TECHNICAL SKILLS

LANGUAGES

Java • Python • R • C# • C++ • C
 Javascript • Prolog • Lua • \LaTeX

TOOLS AND APIS

MySQL • Git • Weka • SciKit-Learn
 Play Framework 2.0 • Flask Framework

COMMUNITY WORK

PEER REVIEWING

AISTATS | 2015
 AMIA ANNUAL SYMPOSIUM | 2014

EDITORIAL WORK

ACM - XRDS MAGAZINE

DEPARTMENT EDITOR

Jan 12 – Present

Editor for Back, a then-now comparison of technology fitting the issue theme.

EDUCATION

UNIVERSITY OF WISCONSIN - MADISON | MADISON, WI

PHD | COMPUTER SCIENCE (MACHINE LEARNING)

Expected Summer 2015

MS | COMPUTER SCIENCE

September 08 - December 09

GUSTAVUS ADOLPHUS COLLEGE | ST. PETER, MN

BA | COMPUTER SCIENCE, CLASSICS

August 03 - May 07

Magna Cum Laude • Phi Beta Kappa honor society • Eta Sigma Phi honor society

President's List • Dean's List • Cross Country • Track & Field

EXPERIENCE

UNIVERSITY OF WISCONSIN - MADISON | MADISON, WI

RESEARCH ASSISTANT | MAY 11 – PRESENT

Research with Jude Shavlik, David Page, and Elizabeth Burnside in uplift modeling, breast cancer prediction, adverse drug event prediction, and personalized medicine.

LECTURER | JUNE 10 - AUGUST 10

Lecturer for 8-week summer session of the intro CS course. Included development of course syllabus, preparing/grading assignments/exams, and supervising a TA.

TEACHING ASSISTANT | SEPTEMBER 08 - MAY 11

Teaching assistant for the intro CS course. Included four semesters as a section instructor, and two semesters as a lab TA.

CONSULTING | MADISON, WI

DATA SCIENCE CONSULTANT | NOVEMBER 14 – PRESENT

Consultant work on various tasks in predictive modeling and data mining, including: Data collection and processing, design and implementation of predictive modeling pipelines, and model evaluation and selection.

PICKUP RUNNING LLC | MADISON, WI

Co-FOUNDER | MAY 11 – PRESENT

Webapp for organizing group runs around Madison. Like pickup games for running.

OPEN SYSTEMS INTERNATIONAL | PLYMOUTH, MN

SOFTWARE ENGINEER | AUGUST 07 – AUGUST 08

Developed SCADA software for power systems, and worked on the compile team.

PUBLICATIONS

- [1] F. Kuusisto, I. Dutra, M. Elezaby, E. Mendonca, J. Shavlik, and E. Burnside. Leveraging expert knowledge to improve machine-learned decision support systems. In *AMIA Joint Summits on Translational Science*, 2015.
- [2] F. Kuusisto, I. Dutra, H. Nassif, Y. Wu, M. Klein, H. Neuman, J. Shavlik, and E. Burnside. Using machine learning to identify benign cases with non-definitive biopsy. In *IEEE International Conference on e-Health Networking, Applications & Services*, 2013.
- [3] F. Kuusisto, V. Santos Costa, H. Nassif, E. Burnside, D. Page, and J. Shavlik. Support vector machines for differential prediction. In *European Conference on Machine Learning (ECML-PKDD)*, 2014.
- [4] H. Nassif, F. Kuusisto, E. Burnside, D. Page, J. Shavlik, and V. Santos Costa. Score As You Lift (SAYL): A statistical relational learning approach to uplift modeling. In *European Conference on Machine Learning (ECML-PKDD)*, 2013.
- [5] H. Nassif, F. Kuusisto, E. Burnside, and J. Shavlik. Uplift modeling with ROC: An SRL case study. In *International Conference on Inductive Logic Programming (ILP)*, 2013.