KATHERINE A. KEITH

kkeith@cs.umass.edu

EDUCATION

University of Massachusetts Amherst 2016–Present
M.S. / Ph.D. in Computer Science *Amherst, MA*

Lewis & Clark College 2011–2015
B.A. in Mathematics (departmental honors, summa cum laude) *Portland, OR*
Minor: Chinese

RESEARCH EXPERIENCE

Graduate Research Assistant September 2016–Present
University of Massachusetts, Amherst *Amherst, MA*

- Natural language processing, machine learning, and computational social science research
- Advisor: Dr. Brendan O'Connor

Undergraduate Research Assistant May 2014–August 2014
Lewis & Clark College *Portland, OR*

- Developed an agent-based simulation of intergenerational wealth transfer in medieval England
- Advisor: Dr. Clifford Bekar

TEACHING EXPERIENCE

Fulbright English Teaching Assistant August 2015–June 2016
U.S. Department of State *Kinmen, Taiwan*

- Taught first through sixth grade ESL courses in a public elementary school
- Facilitated multi-cultural dialogue and programming

Mathematics Tutor January 2012–May 2015
Lewis & Clark College *Portland, OR*

- Tutored Calculus I, Calculus II ,and Linear Algebra for private one-on-one and group sessions
- Tutor in the Symbolic and Quantitative Resource Center (SQRC)

SELECTED PUBLICATIONS

Katherine A. Keith, Abram Handler, Michael Pinkham, Cara Magliozzi, Joshua McDuffie, and Brendan O'Connor. Identifying civilians killed by police with distantly supervised entity-event extraction. In *Proceedings of Empirical Methods in Natural Language Processing (EMNLP)*. 2017.

PRESENTATIONS & POSTERS

- "Temporal, Embedding-Based Soft Deduplication of Police Killing Events." *Database Design & Implementation* final class project (2017)
- "Probabilistic Modeling of Trending Words on Twitter." *Statistical Machine Learning* final class project (2016)

- "Machine Learning Classification of Job Loss Twitter Messages." *Introduction to Natural Language Processing* final class project (2016)
- "Extending the Pontryagin Maximum Principle of Optimal Control Theory for Inequality Constraints and Discounting." *Lewis & Clark College Mathematics Department Senior Honors Thesis* (2015)
- "An Agent-Based Simulation of Intergenerational Mobility Amongst the English Medieval Peasantry." *Andrew W. Mellon Student-Faculty Research Project* (2014)

SELECTED COURSES

Probabilistic Graphical Models, Database Design & Implementation, Statistical Machine Learning, Introduction to Natural Language Processing, Advanced Probability & Statistics, Real Analysis, Abstract Algebra, Game Theory, Numerical Analysis, Differential Equations, Linear Algebra

SERVICE

Research Experience for Undergraduates (REU) Mentor Summer 2017
University of Massachusetts Amherst, College of Computer Science

Social Committee Member January 2016–Present
University of Massachusetts Amherst Computer Science Women's Group

Women in Engineering and Computing Career Day October 24, 2016
Student Volunteer: Play It/Code It - An Introduction to Programming with Games and Scratch
University of Massachusetts Amherst

TECHNICAL STRENGTHS

Primary programming language	Python
Databases	SQL, Postgres
Data science tools	R, scipy, scikit-learn, numpy

AWARDS & HONORS

- Computing Research Association of Women (CRAW) Graduate Cohort Member (2017)
- Paul Utgoff Memorial Graduate Scholarship in Machine Learning (2016)
- Fulbright ETA Grantee with the U.S. Department of State (2015–16)
- Rhodes Scholarship Finalist (2015)
- Marshall Scholarship Finalist (2015)
- Rena Ratte Award (2015)
- Robert B. Pamplin Jr. Society Fellow (2012–2015)
- Dean's List, Lewis & Clark College (2011–2015)
- Project Pengyou National Leadership Fellow (2014)
- Phi Beta Kappa Member (2014–2015)
- Pi Mu Epsilon Member (2014–2015)
- Barbara Hirschi Neely Four-Year Full-Tuition Scholarship Recipient (2011–2015)
- NCAA Division III Cross-Country All-Academic (2012)

· Lewis & Clark Cross-Country Four-Year Varsity Letter Winner (2011–2015)