Blake Bassett

Contact Information

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Research Interests

Software engineering, software testing, program analysis, programming languages, program comprehension, natural language processing.

Education

University of Illinois Urbana-Champaign
Ph.D. in Computer Science — ***expected*** **May 2018**
Advisor: Tao Xie

The University of Alabama, Tuscaloosa, Alabama
Master of Science in Computer Science — **May 2013**
GPA: 4.0/4.0
Thesis: *Structural Term Weighting Schemes for LDA Based Feature Location*
Advisor: Nicholas A. Kraft

Bachelor of Science in Computer Science & Mathematics — **May 2012**
GPA: 4.0/4.0

Graduate Coursework

Software Design & Development
Foundations of Software Engineering
Software Evolution
Formal Languages and Automata
Algorithms
Database Management Systems
Computer Systems Architecture
Program Verification
Advanced Topics in Software Engineering
Logic
Advanced Security
Natural Language Processing

Professional Experience

Graduate Research Assistant — **August 2014–present**
University of Illinois Urbana-Champaign
Currently investigating extensions to dynamic symbolic execution based unit test generation of .NET code to utilize pre-existing unit test structure and assertions under the direction of Dr. Tao Xie.

Software Engineering Intern — **May 2014–August 2014**
Google
Developed a text processing and machine learning based clustering pipeline using a MapReduce-like framework for the analysis of large scale mobile application data with respect to security properties.

Graduate Research Assistant — **January 2014–May 2014**
University of Illinois Urbana-Champaign
Leveraged an NLP infrastructure to aid in software engineering research tasks under the advisement of Dr. Tao Xie. Directions explored included extraction of configuration semantics from user manuals and assisting in comprehension of MOOC forums.

Graduate Research Assistant — **August 2012–May 2013**
The University of Alabama
Investigated the effectiveness of weighting text based feature location techniques using structural information with Dr. Nicholas Kraft. That is, giving more weight to certain terms based on syntactic meaning (e.g. method names). Topics involved include information retrieval methods (e.g. Latent Dirichlet Allocation) and parsing using ANTLR.

Graduate Assistant — **June 2012–July 2012**
Research Experience for Undergraduates, The University of Alabama
Coordinated a research group of undergraduate students under the supervision of Dr. Nicholas Kraft to produce a tool intended to aid with the comprehension of code clones through visualization. The tool was specifically focused on better understanding of code clone evolution.

Undergraduate Research Assistant — **June 2011–July 2011**
Research Experience for Undergraduates, The University of Alabama
Worked under the supervision of Dr. Jeffrey Carver on statistical analysis of survey results. The survey pertained to methods used when evaluating peers in an open source software community. Analysis performed with SPSS.

Application Developer — **January 2011–May 2011**
Capstone Design Course, The University of Alabama
Designed an Android application framework for delivering location based media. Leveraged the framework to develop a prototype campus tour application that displayed informational text as well as picture and video galleries when near academic buildings.

Undergraduate Research Assistant — **August 2010–May 2011**
Computer Based Honors Program, The University of Alabama
Extended a model wireless localization toolkit to pursue potential optimizations with Dr. Xiaoyan Hong. Empirically evaluated various factors' effects on the latency of the localization process.

Publications

Bosu, A., Carver, J. C., Guadagno, R., **Bassett, B.**, McCallum, D., and Hochstein, L. Peer impressions in open source organizations: A survey. *Journal of Systems and Software (JSS)*, 2014

Bassett, B. and Kraft, N. A. Structural information based term weighting in text retrieval for feature location. In *21st IEEE International Conference on Program Comprehension*, 2013

Teaching

Teaching Assistant for **CS 225: Data Structures** **August 2013–December 2013**

Conference Attendance

Presented "Structural information based term weighting in text retrieval for feature location" at the 21st IEEE International Conference on Program Comprehension (ICPC'13), San Francisco, CA, USA, May 2013.

Attended the 27th IEEE International Conference on Software Maintenance (ICSM'11), Williamsburg, VA, USA, September 2011.

Technical Skills

Languages:	Proficiency:	Java, Ruby, Scala
	Familiarity:	Bash, C++, LaTeX/BibTeX, Python, Scheme, SQL
	Exposure:	Fortran, Haskell, Perl 5, PHP
Tools & APIs:		Android SDK, Eclipse, Vim, Cygwin, SPSS, gcc, Git, Subversion
Systems:		Linux (Ubuntu/Arch Linux), Max OSX, Windows XP/Vista/7/8

University Honors and Awards

Capstone Engineering Society Outstanding Senior in Computer Science	**2012**
Outstanding Senior in Computer Science	**2012**
Outstanding Junior in Computer Science	**2011**
Outstanding Sophomore in Computer Science	**2010**
Computer Based Honors Program Freshman of the Year	**2009**
President's List	**2009–2012**
Robert C. Byrd Scholarship	**2008–2011**
Alumni Honors Scholarship	**2008–2012**
Kenneth M. Carnathan Crimson Scholarship	**2008–2012**

Organizations

Upsilon Pi Epsilon International Honor Society, *2012 President*	**2011–2013**
Association for Computing Machinery, *2011 Treasurer, 2012 Vice Chair*	**2010–2013**
Phi Kappa Phi Honor Society	**2010–2013**
100 Problems Curriculum Honors CS Program encouraging independent study	**2009–2013**
Alpha Lambda Delta Honor Society	**2009–2013**
National Society of Collegiate Scholars	**2009–2013**
University Fellows Experience	**2008–2013**
University Honors Program	**2008–2012**
Computer Based Honors Program	**2008–2012**