

## Andrew M. Kent

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CONTACT INFORMATION	Lindley Hall 215 Indiana University 150 S. Woodlawn Ave. Bloomington, IN 47405	<i>Fax:</i> (812) 855-4829 <i>E-mail:</i> andmkent@iu.edu <i>Github:</i> github.com/pnwamk <i>WWW:</i> pnwamk.github.io
RESEARCH INTERESTS	I'm interested in developing programming language based techniques that help developers design and build robust software in real world settings. In particular I hope to increase the accessibility and effectiveness of verification techniques by exploring their gradual application.	
SKILLS	Research in programming language theory and formal logic, functional and imperative programming, familiarity with the Unix environment and a variety of programming languages/tools (Racket, Coq, C/C++, Agda, Java, Python, git, etc).	
EDUCATION	<b>Indiana University</b> , Bloomington, Indiana USA Ph.D. Student, Computer Science, May 2014 - Present <ul style="list-style-type: none"><li>• Advisor: Sam Tobin-Hochstadt</li></ul> <b>Brigham Young University</b> , Provo, Utah USA B.S., Computer Science, August 2013	
PUBLICATIONS	Occurrence Typing Modulo Theories, with David Kempe and Sam Tobin-Hochstadt, <i>Proc. 37<sup>th</sup> ACM Conference on Programming Language Design and Implementation (PLDI)</i> , 2016.  Design and Evaluation of Gradual Typing in Python, with Michael M. Vitousek, Jeremy G. Siek, and Jim Baker, <i>Proc. 10<sup>th</sup> ACM Symposium on Dynamic Languages (DLS)</i> , 2014.  Linking the Past: Discovering Historical Social Networks from Documents and Linking to a Genealogical Database, with Douglas J. Kennard and William A. Barrett, <i>Proc. 1<sup>st</sup> Workshop on Historical Document Imaging and Processing (HIP)</i> , 2011.	
HONORS AND AWARDS	Graduated <i>magna cum laude</i> from Brigham Young University.  Awarded NASA Space Grant Consortium Fellowship (Fall 2013 – Winter 2014)  Top graduate in multi-service military Intermediate Communications Signals Analysis course (Corry Station Naval Technical Training Center, Florida, April – August 2007)	
ACADEMIC EXPERIENCE	<b>Indiana University</b> , Bloomington, Indiana USA <i>Graduate Research Assistant</i> <b>May 2014 – Present</b> Investigating type-based program verification, evaluating gradual typing applications in mainstream languages, and developing techniques to bring dependent types to dynamically typed languages. Advised by Sam Tobin-Hochstadt.  <i>Assistant Instructor</i> <b>January 2016 – Present</b> <i>Various courses</i> Assisted with instruction and grading for a graduate level programming language theory course and an undergraduate level course on the theory of computation.	

**Brigham Young University**, Provo, Utah USA

*Graduate Research Assistant*

**August 2013 – April 2014**

Investigated the formalization of security protocol analysis techniques (Strand Spaces) utilizing the Coq proof assistant to create a verified basis for accessible, automated protocol analysis techniques. Advised by Jay McCarthy.

*Teaching Assistant*

**August 2013 – April 2014**

*CS-330 Concepts of Programming Languages*

Held regular office hours and assisted in teaching programming language concepts.

*Undergraduate Research Assistant*

**May – September 2011**

Developed method for automatically generating historical social networks from source documents to aid historical research. Advised by William Berret and Tom Sederberg.

TALKS

Practical Dependently Typed Racket, RacketCon 2015, St. Louis, MO, USA.

Adding Practical Dependent Types to Typed Racket, Scripts to Programs Workshop 2015, Prague, Czech Republic.

PROFESSIONAL  
EXPERIENCE

**Microsoft Corporation**, Redmond, Washington USA

*Software Development Engineer Intern*

**May 2012 – August 2012**

Explored optimizations and improvements for Microsoft OneNote during a summer internship, receiving a full-time offer for employment upon completion.

**United States Marine Corps**, Camp Pendleton, California USA

*Signals Intelligence Analyst*

**November 2005 – August 2010**

Provided detailed signals intelligence analysis and reporting in support combat operations in the Al Anbar province of Iraq during two separate deployments. Additionally, trained and led a team of six signals intelligence analysts during the second deployment to Iraq.

OPEN SOURCE  
INVOLVEMENT

*Racket and Typed Racket*

**2014 – Present**

I contribute to the Racket programming language and am a primary contributor to the Typed Racket language.

COMMUNITY

*Cub Master*

**December 2014 – Present**

Help organize combined scouting activities for youth ages 8-11.

*Interfaith Winter Shelter Volunteer*

**January 2016 – Present**

Evening shift volunteer for at a low-barrier winter homeless shelter.