# Ryan Carlson

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## Education

**Language Technologies Institute, Carnegie Mellon University**, Pittsburgh, PA (2011 - 2013)
  Master of Science in Language Technologies. Fellow in the Program for Interdisciplinary Education Research (PIER).

**Swarthmore College**, Swarthmore, PA (2007 - 2011)
  Graduated with Honors. Major in Computer Science, Minor in Cognitive Science.

## Professional Experience

**Research Programmer**, *Carnegie Learning*, Pittsburgh, PA (Feb. 2014 – present)

  - Designed and implemented an AngularJS tool with a Django backend allowing non-technical content designers to author computer-driven math tutors. Led to significant increase in the company's content output.
  - Designed and implemented a highly configurable iPad game framework to help develop students' number fluency.
  - Conducted field studies to test game efficacy, constructing interventions based on non-cognitive factors.
  - Instrumented fine-grained, in-game behavior tracking; ran statistical analyses to understand interventions' effects.
  - Wrote and edited grant proposals for the research department.

**Software Engineering Intern, Google Maps for Android**, *Google*, Mountain View, CA (May – Aug. 2013)

  - Created framework to enhance benchmark reliability by making tests network-independent.
  - Improved Places Pages, offering user additional details about a business.

**Software Engineer**, *Safaba Translation Solutions*, Pittsburgh, PA (Nov. 2011 – Dec. 2013)

  - Built machine translation systems customized to client demands.
  - Analyzed translation quality and generated fixes to improve our engines.
  - Developed SSL-encrypted translation server used by our clients.

**Lead Mobile Developer**, *Ludo Mechanica*, Pittsburgh, PA (Aug. 2012 – May 2013)

  - Developed DropKicker, an Android app to help users change their habits.
  - Worked with a small team to design the app specifications and visual direction.

## Publications

**R. Carlson**, K. Genin, M. Rau, and R. Scheines. Student Profiling from Tutoring System Log Data: When do Multiple Graphical Representations Matter? In Proc. Conference on Educational Data Mining, July 2013.

I. Goldin and **R. Carlson**. Learner Differences and Hint Content. In Proc. Conference on Artificial Intelligence in Education, July 2013.

**R. Carlson**, V. Keiser, N. Matsuda, K. R. Koedinger, C. P. Rosé. Building a Conversational SimStudent. In Proc. Conference on Intelligent Tutoring Systems, pages 563-569, June 2012 (Short Paper).

A. Ogan, S. Finkelstein, E. Walker, **R. Carlson**, and J. Cassell. Rudeness and Rapport: Insults and Learning Gains in Peer Tutoring. In Proc. Conference on Intelligent Tutoring Systems, pages 11-21, June 2012.

A. Stromme, **R. Carlson**, and T. Newhall. Chestnut: A GPU Programming Language for Non-Experts. In Proc. ACM Workshop on Programming Models and Applications for Multicores and Manycores, pages 156-167, Feb 2012.

**R. Carlson** and A. Danner. Bridge detection in grid terrains and improved drainage enforcement. In Proc. ACM Symposium on Advances in Geographic Information Systems, pages 250–260, Nov 2010.

## Skills

**Computer Languages** *(Proficient)* JavaScript, Python, HTML, CSS, Objective-C, C, Java, R, Bash; *(Familiar)* C++, Lisp (CL/Scheme), PostgreSQL.
**(My Favorite) Tools** Git, Atom, OmniGraffle, GIMP, Inkscape.