# DANIEL PERELMAN

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## Education

- **University of Washington**—Seattle, WA
  *Ph.D. candidate in Computer Science and Engineering*
  - Advisors: Dan Grossman and Sumit Gulwani (Microsoft Research)
  - Thesis: *Program Synthesis Without Full Specifications for Novel Applications*
  - Expected graduation June 2015
- **Cornell University College of Arts & Sciences**—Ithaca, NY
  *B.A. in Computer Science and Mathematics*
  - GPA: 3.8 (overall), 4.1 (CS major), 4.0 (Math major)
  - Graduated May 2010

## Publications

- **Daniel Perelman**, Sumit Gulwani, Dan Grossman, Peter Provost. *Test-Driven Synthesis*, Edinburgh, UK, PLDI 2014.
- Nikolai Tillmann, Judith Bishop, R Nigel Horspool, **Daniel Perelman**, Tao Xie. *Code Hunt: Searching for Secret Code for Fun*, Hyderabad, India, SBST 2014.
- **Daniel Perelman**, Sumit Gulwani, Thomas Ball, Dan Grossman. *Type-Directed Completion of Partial Expressions*, Beijing, China, PLDI 2012.

## Research interests

- **Automating Grading**—Sumit Gulwani, Judith Bishop, Dan Grossman
  *2014–present*
  - Used TDS technology to create hints system for programming game CodeHunt.
  - Continuing to improve technology for applications to feedback for introductory computer science education.
- **Test-Driven Synthesis**—Sumit Gulwani, Dan Grossman
  *2012–present*
  - Developed theory and implemention of a general-purpose program synthesis technique inspired by Test Driven Development.
- **Code completion**—Sumit Gulwani, Thomas Ball, Dan Grossman
  *2010–2012*
  - Developed partial expressions language for API discovery.
  - Implemented Visual Studio plug-in for using partial expressions for API discovery in real projects (`https://pec.codeplex.com/`).

## Experience

- **University of Washington**—Seattle, WA
  *Research Assistant: September 2010–present*
  - Worked on code completion and Test-Driven Synthesis projects described above.

- **Microsoft Research**—Redmond, WA
  *Research Intern: June 2013–August 2014*
  - Worked on Test Driven Synthesis and Automating Grading projects described above.
  - Scaled up technology to use in Code Hunt educational game using Azure.
- **Microsoft Research**—Redmond, WA
  *Research Intern: June 2012–September 2012*
  - Developed Test Driven Synthesis project described above.
- **University of Washington Dept. of Computer Science and Engineering**—Seattle, WA
  *Teaching Assistant: September 2010–March 2011*
  - Graded, held office hours, and taught some lectures for Introduction to Algorithms and Foundations of Computing.

## Skills

- **Languages:** C#, Java, Python, Haskell, OCaml, Bash, PHP, Javascript, Scala, C++, C, assembly (x86, ARM, 65c816)
- **Technologies:** Azure, MySQL, PostgreSQL, Django, Apache, IIS, LaTeX, Git, Mercurial, Subversion