
Nathan Ong

Curriculum Vitae

Department of Computer Science
University of Pittsburgh
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Education

August 2014---Present
University of Pittsburgh

- Ph.D program in the Department of Computer Science
- Advisors: Professor Adam Lee and Professor Panos Chrysanthis
- GPA: 3.86/4.0

August 2010---April 2014
University of Pittsburgh

- Bachelor of Science in Computer Science
- Minors in Chinese and Mathematics
- GPA: 3.98/4.0 (Summa Cum Laude)

June 2013---August 2013
IES Abroad, Beijing Foreign Studies University

- Studied abroad in Beijing, China
- Enrolled in the program's language intensive course

August 1998---June 2010
Winchester Thurston School, Pittsburgh, PA

Occupation

September 2010----Present
University of Pittsburgh
Research Assistant

- Worked with several professors in several projects across my undergraduate and graduate career
- See Projects for a complete list

August 2014---Present
University of Pittsburgh
Teaching Assistant

- Taught recitations for Introduction to Computer Programming (Java) (CS 0007) Summer 2015, Formal Methods of Computer Science (CS 1502) Spring 2015, and Introduction to Computer Graphics (CS 1566) Fall 2014
- Graded for Design and Analysis of Algorithms (CS 2150) Spring 2016, Theory of Computation (CS 2110/CS 1511) Spring 2016, CS 0007, CS 1502, Introduction to Theoretical Computer Science (CS 1511) Spring 2015, and CS 1566

June 2009----August 2009, June 2010----August 2010, June 2011----August 2011
Carnegie Mellon University
Teaching Assistant

- Taught Introduction to Computer Programming in Java in the summer program Andrew's Leap (now Leap @ CMU)

Projects

2016----Present, University of Pittsburgh

- Composing a dataset for a new AI-complete problem merging computer vision, machine learning, and knowledge bases
- Advised by Professor Adriana Kovashka

2015----Present, University of Pittsburgh

- Creating a new diversity operator for data stream management systems by converting PrefDiv, a diversity operator for non-streaming systems, to be used in a streaming context
- Advised by Professor Panos Chrysanthis

2014----Present, University of Pittsburgh

- Developed graphical user interfaces to aid users in using the PAQO and PASQL systems (See Publications)
- Advised by Professor Adam Lee and Professor Panos Chrysanthis

2013----2014, University of Pittsburgh

- Reduced the repetitiveness of students' responses to a computer tutoring system
- Advised by Professor Diane Litman

2013----2014, University of Pittsburgh

- Explored the properties of modded sumsets
- Advised by Dr. Jeffrey Wheeler

2010----2013, University of Pittsburgh

- Analyzed essays from an online essay peer review website to determine if peer review helpfulness is determined by keywords excerpted from essays (See Publications)
- Advised by Professor Diane Litman

2010----2011, League of Women Voters, Greater Pittsburgh Student Voices, Election Assistance Commission, Carnegie Mellon University, University of Pittsburgh Electronic Voting System Designer and Programmer

- Developed a mock electronic voting system to use for the 2010 midterm elections for the greater Pittsburgh area high schools
- Advised by Professor David Eckhardt and Dr. Collin Lynch

Publications

Nathan Ong, Stephen Rojcewicz, Nicholas Farnan, Adam Lee, Panos Chrysanthis, and Ting Yu, “Interactive Preference-Aware Query Optimization” in *Proceedings of the 31st IEEE International Conference on Data Engineering (ICDE)*, April 2015.

Nathan Ong, Diane Litman, and Alexandra Brusilovsky, “Ontology-Based Argument Mining and Automatic Essay Scoring” in *Proceedings of the First Workshop on Argumentation Mining* held in conjunction with the *52nd Annual Meeting of the Association for Computational Linguistics (ACL 2014)*, June 2014.

Awards and Honors

- 2015 - 2016 Computer Science Department Teaching Assistant Mentor Award, University of Pittsburgh
- 2015 Orrin E. and Margaret M. Taulbee Award, University of Pittsburgh's Computer Science Department
- 2013 John H. Tsui Memorial Grant, University of Pittsburgh's Nationality Rooms Scholarship program

Volunteer Work

August 2010----June 2014

**Carnegie Mellon University, Winchester Thurston School
Coach's Assistant**

- Helped organize Western Pennsylvania's first regional mathematics team
- Taught mathematics in the pursuit of the American Regions Mathematics League competition and other mathematics competitions

August 2011----June 2013
Carnegie Mellon University
Mentor

- Mentored students in the For Inspiration and Recognition of Science and Technology Robotics Competition Team #3504 (Girls of Steel)
- Taught programming in Java

August 2007----June 2008, August 2008----June 2009, August 2009----June 2010
Winchester Thurston School
Tutor

- Tutored students in Physics and Chemistry

August 2007----June 2008, August 2008----June 2009, August 2009----June 2010
Winchester Thurston School
Coach

- Tutored and coached students in a middle school robotics club

June 2008----August 2008
Carnegie Mellon University
Teaching Assistant

- Taught Introduction to Computer Programming in Java in the summer program Andrew's Leap (now Leap @ CMU)