

Nicolas C. Ward

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EDUCATION

9/2007 – 5/2013 **Harvard University Graduate School of Arts and Sciences**, Cambridge, MA

- ▶ Received an S.M. in Computer Science
- ▶ GPA: 3.29/4.0 Cumulative
- ▶ Relevant Coursework: Machine Learning, Theory of Computation, Natural Language Processing, Numerical Methods, Database Systems, Massively Parallel Programming, Biologically Inspired Systems

9/2001 – 5/2005 **Swarthmore College**, Swarthmore, PA

- ▶ Received a B.S. in Engineering and a B.A. in Computer Science
- ▶ GPA: 3.62/4.0 Cumulative, 3.67/4.0 Engineering, 3.81/4.0 Computer Science
- ▶ Relevant Coursework: Computer Graphics, Computer Vision, Computer Security, Computer Architecture, Computational Linguistics, Natural Language Processing, Artificial Intelligence, Theory of Computation, Digital Logic
- ▶ Awards: Sigma Xi membership (2003), Tau Beta Pi membership (2003)

PROGRAMMING EXPERIENCE

8/2005 – Present **Raytheon BBN Technologies**, Text Group, Speech, Language & Multimedia Business Unit, Cambridge, MA

As a Staff Scientist in the Text Group, my responsibilities include developing, evaluating, and maintaining a wide variety of text extraction components, primarily for government research contract customers.

- ▶ Extended DEFT public API and worked with academic teams to integrate end-to-end system (Java)
- ▶ Maintained and updated core text processing codebase (C++)
- ▶ Extended T-REX and Cicero systems to new domain-specific relation and event types (C++, Java)
- ▶ Improved profile generation confidence model for Entity Profile System of Spectrum project (C++, Python, C#)
- ▶ Prototyped scientific entity detection for FUSE technological emergence project (Python)
- ▶ Developed and evaluated Machine Reading triple extraction pipeline (C++, Java)
- ▶ Worked on RadNLP automatic medical annotation system for mammography (C#)
- ▶ Developed generic text processing pipeline for use with various multiprocessor cluster queueing software; system now in use by several department projects (Python)
- ▶ Worked on two successive versions of AQUAINT question answering system (Perl, C++, C#)

PROGRAMMING EXPERIENCE (cont.)

6/2003 – 5/2005 **Swarthmore College**, Swarthmore Robotics Team, Swarthmore, PA

- ▶ Worked for Dr. Bruce A. Maxwell
- ▶ Developed two successive versions of a robot teleoperation interface and telemetry visualizer for multiple wheeled robots
- ▶ Successfully used interfaces in Urban Search & Rescue (USR) competitions at American Association for Artificial Intelligence (AAAI) conferences; team placed 2nd at AAAI '03 and 1st at AAAI '04

2/2003 – 5/2005 **Swarthmore College**, Swarthmore College Computer Society, Swarthmore, PA

- ▶ Volunteered as a system administrator and treasurer for a student technology group
- ▶ Responsible for maintaining independent servers and computer lab providing services to students

PUBLICATIONS

Freedman, M., Ramshaw, L., Boschee, E., Gabbard, R., Kratkiewicz, G., Ward, N., & Weischedel, R. (2011, July). Extreme extraction: machine reading in a week. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (pp. 1437-1446). Association for Computational Linguistics.

Maxwell, B. A., Ward, N., & Heckel, F. (2004). A configurable interface and software architecture for robot rescue. In Sixteenth conference on innovative applications of artificial intelligence, San Jose, CA, USA (pp. 25-29).

Maxwell, B. A., Ward, N., & Heckel, F. (2004, April). Game-based design of human-robot interfaces for urban search and rescue. In Proceedings of the CHI 2004 Conference on Human Factors in Computing Systems.

Maxwell, B. A., Ward, N., & Heckel, F. (2003). A Human-Robot Interface for Urban Search and Rescue. AAAI Mobile Robot Competition, 3, 01.

SKILLS & INTERESTS

General Skills

Capable of learning new technical and non-technical skills very quickly, especially related to resurrecting and maintaining abandoned codebases. Experienced with converting abstract design goals into concrete implementations implemented in a wide variety of programming languages and environments. Excellent analytical and creative writing ability. Six Sigma certified.

Computer Languages

Python, C++, Java, C, C#, XML, Perl, Objective-C, Bash, JavaScript, HTML, CSS, JSON

Operating Systems

Mac OS X, Debian Linux, Scientific Linux, Windows

GitHub

<https://github.com/UltraNurd> - Various class projects and open source contributions

Interests

Architecture, constructed languages, board games, choral music performance, linguistics, military history, mobile robotics, museums, open-source software, reading, stage acting, Star Trek, video games