

Kristen Parton

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EDUCATION	Ph.D. Program, Computer Science, Columbia University 9/2006 - Present Advisor: Professor Kathleen McKeown M.S., Computer Science, Columbia University 6/2008 B.S., Computer Science, Stanford University 6/2003
RESEARCH INTERESTS	Cross-lingual and multilingual applications; natural language processing; machine translation; information retrieval.
RESEARCH PROJECTS	Columbia University , Professor Kathleen McKeown 9/2006 - Present <ul style="list-style-type: none">• Designed and implemented a system for cross-lingual information retrieval (CLIR) that leverages simultaneous search in multiple languages against jointly indexed documents to improve result relevance.• Developed a machine translation post-editing module for question answering that uses word alignments and CLIR results to improve readability and comprehensibility of translated answers.• Investigated and compared various approaches to a cross-lingual semantic role labeling task. Ran in-depth evaluation and error analysis of source-language, target-language and hybrid systems. Center for Language and Speech Processing , JHU Summer 2002 <ul style="list-style-type: none">• Implemented modules to insert punctuation and generate English surface morphology as member of the “Generation in the Context of Machine Translation” workshop. Stanford University , Professor Christopher Manning 3/2001 - 6/2002 <ul style="list-style-type: none">• Developed improvements for Kirrkirr, a dictionary visualization program used by Warlpiri speakers in Australia. Implemented a morphological analyzer to facilitate word lookup for the Warlpiri language.
PROFESSIONAL EXPERIENCE	Google, Inc. , Intern Summer 2009 <ul style="list-style-type: none">• Implemented a novel indexing architecture to support efficient cross-lingual retrieval. Built a large-scale prototype for Arabic-English web search. Google, Inc. , Intern Summer 2008 <ul style="list-style-type: none">• Proposed, designed and implemented a translation feature that launched on Google maps. When cross-lingual reviews appear, a “Translate” link enables a user to read reviews in his or her language.• Investigated cross-lingual sentiment analysis for local reviews. Yahoo!, Inc. , Intern 1/2006 - 8/2006 <ul style="list-style-type: none">• Developed a prototype for Japanese-English cross-lingual image search.• Implemented a system for mining the web to find parallel, multilingual text. Stottler-Henke Associates, Inc. , AI Software Engineer 1/2004 - 1/2006 <ul style="list-style-type: none">• Lead software engineer for EarthTutor, an adaptive intelligent tutoring system for earth science. Designed and developed authoring tool to allow non-technical course creators to build tutoring content.• Software engineer for Operator Machine Interface Assistant, a training program for the Navy helicopter interfaces. Met with clients to do knowledge elicitation. Managed summer interns.

TEACHING Program Coordinator, **Emerging Scholars Program** Spring 2008 - Present

- Coordinated a weekly peer-led workshop to encourage undergraduate women to continue in Computer Science.
- With the other coordinators, developed course content, managed peer leaders, and wrote proposal to secure \$15,000 seed funding from NCWIT Academic Alliance.

Teaching Assistant, **Search Engine Technology** Spring 2007

TALKS “Task-Embedded Machine Translation.” IBM Yorktown. October, 2009.
“Task-Oriented Machine Translation: Evaluating, Post-Editing and Using MT.” Candidacy Exam. May, 2009.

AWARDS National Science Foundation Graduate Research Fellowship 2006 - Present
Columbia Computer Science Department Service Award 2008, 2009
Intel Women in Science and Engineering Scholarship 2000 - 2003

PUBLICATIONS Kristen Parton, Kathleen R. McKeown, Robert Coyne, Mona T. Diab, Ralph Grishman, Dilek Hakkani-Tr, Mary Harper, Heng Ji, Wei Yun Ma, Adam Meyers, Sara Stolbach, Ang Sun, Gokhan Tur, Wei Xu and Sibel Yaman.
Who, What, When, Where, Why? Comparing Multiple Approaches to the Cross-Lingual 5W Task
In Proceedings of ACL 2009.

Kristen Parton, Kathleen R. McKeown, James Allan, and Enrique Henestroza.
Simultaneous Multilingual Search for Translingual Information Retrieval
In Proceedings of CIKM 2008.

Kristen Parton, Weiyun Ma, Kathleen McKeown, and James Allan.
Using Query Time Information to Improve Multilingual Search and Response Generation
To appear in the GALE book.

Christopher Manning and Kristen Parton.
Kirrkirr: A Flexible and Approachable Software Interface to Indigenous Dictionaries
Institute for Research in Cognitive Science Workshop on Linguistic Databases Conference, 2001.

SKILLS **Programming:** Java, C/C++, Perl, JavaScript; MapReduce.
Languages: intermediate Spanish, French, Russian; beginning Arabic (2 years).