CURRICULUM vitae
Nitin MADNANI

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Citizenship: India

Current Position

I have been employed as a **Research Scientist** with the Text, Language and Computation research group of the **Educational Testing Service (ETS)** at Princeton, New Jersey since 2010.

Education

University of Maryland, College Park, MD.
Ph.D. in Computer Science, GPA: 4.0
Dissertation Title: The Circle of Meaning: From Translation to Paraphrasing and Back
2010.

University of Maryland, College Park, MD.
M.S in Computer Engineering, GPA: 3.77
Concentration: Computer Organization, Microarchitecture and Embedded Systems
2004.

Punjab Engineering College, Panjab University, India.
B.E. in Electrical Engineering, With Honors
Senior Thesis: Interactive Visualization of Grounding Systems for Power Stations
2000.

Professional Interests

Computational Linguistics, Natural Language Processing, Statistical Machine Translation, Automatic Paraphrase Generation, Machine Learning, Artificial Intelligence and Computer Science Education.

Publications

Book Chapters

- Jill Burstein, Beata Beigman-Klebanov, **Nitin Madnani** and Adam Faulkner. Sentiment Analysis & Detection for Essay Evaluation. *Handbook for Automated Essay Scoring*, Taylor and Francis. Mark D. Shermis & Jill Burstein (eds.). 2013.
- Jill Burstein, Joel Tetreault and **Nitin Madnani**. The E-rater® Automated Essay Scoring System. *Handbook for Automated Essay Scoring*, Taylor and Francis. Mark D. Shermis & Jill Burstein (eds.). 2013.
- Yaser Al-Onaisan, Bonnie Dorr, Doug Jones, Jeremy Kahn, Seth Kulick, Alon Lavie, Gregor Leusch, **Nitin Madnani**, Chris Manning, Arne Mauser, Alok Parlikar, Mark Przybocki, Rich Schwartz, Matt Snover, Stephan Vogel and Clare Voss. Machine Translation Evaluation and Optimization. *Handbook of Natural Language Processing and Machine Translation*, Joseph Olive, John McCary, and Caitlin Christianson (eds), 2011.

Journals

- Beata Beigman Klebanov, Jill Burstein and **Nitin Madnani**. Sentiment Profiles of Multi-Word Expressions in Test-Taker Essays: The Case of Noun-Noun Compounds. *ACM Transactions on Speech and Language Processing*, 10(3), 2013.

- Beata Beigman Klebanov, **Nitin Madnani** and Jill Burstein. Using Pivot-based Paraphrasing and Sentiment Profiles to Improve a Subjectivity Lexicon for Essay Data. *Transactions of the Association for Computational Linguistics*, 2013.
- **Nitin Madnani** and Bonnie Dorr. Generating Targeted Paraphrases for Improved Translation. *ACM Transactions on Intelligence Systems and Technology (Special Issue on Paraphrasing)*, 4(3), 2013.
- Michael Heilman and **Nitin Madnani**. Topical Trends in a Corpus of Persuasive Writing. *ETS Research Report Series*, RR-12-19, 2012.
- **Nitin Madnani** and Bonnie Dorr. Generating Phrasal & Sentential Paraphrases: A Survey of Data-Driven Methods. *Computational Linguistics*. 36(3), 2010.
- **Nitin Madnani**. The Circle of Meaning: From Translation to Paraphrasing and Back. *PhD Dissertation*. Department of Computer Science. University of Maryland College Park. May 2010.
- Matthew Snover, **Nitin Madnani**, Bonnie Dorr and Richard Schwartz. TER-Plus: Paraphrase, Semantic, and Alignment Enhancements to Translation Edit Rate. *Machine Translation*, Special Issue on: Automated Metrics for MT Evaluation, 23(2-3):117-127, 2010.
- **Nitin Madnani**. Querying and Serving N-gram Language Models with Python. *The Python Papers*, 4(2). 2009.
- **Nitin Madnani**. Source Code: Querying and Serving N-gram Language Models with Python. *The Python Papers Source Codes*, 1(1), 2009.
- **Nitin Madnani**. Getting Started on Natural Language Processing with Python. *ACM Crossroads*, 13(4), 2007.
- Bonnie J. Dorr, Necip Fazil Ayan, Nizar Habash, **Nitin Madnani**, and Rebecca Hwa. Rapid Porting of DUSTer to Hindi. *ACM Transactions on Asian Language Information Processing*, 2(2), 2003.

Conferences

- **Nitin Madnani**, Aoife Cahill and Michael Flor. Mining Edit Chains from Wikipedia Revisions. *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics (ACL) - Short Papers*, To appear in 2013.
- **L**ili Kotlerman, **Nitin Madnani** and Aoife Cahill . ParaQuery: Making Sense of Paraphrase Collections. *Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL) - Demos*, To appear in 2013.
- **A**oife Cahill, **Nitin Madnani**, Joel Tetreault and Diane Napolitano. Robust Preposition Error Correction Systems Using Wikipedia Revisions. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, To appear in 2013.
- **Nitin Madnani**, Michael Heilman, Joel Tetreault and Martin Chodorow. Identifying High Level Organization Elements in Argumentative Discourse. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2012.
- **Nitin Madnani**, Joel Tetreault and Martin Chodorow. Re-examining Machine Translation Metrics for Paraphrase Identification. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2012.
- Beata Beigman Klebanov, Jill Burstein, **Nitin Madnani**, Adam Faulkner and Joel Tetreault. Building Subjectivity Lexicon(s) From Scratch For Essay Data. *Proceedings of the 13th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing)*, 2012.
- **Nitin Madnani**. iBLEU: Interactively Debugging & Scoring Statistical Machine Translation Systems. *Proceedings of the Fifth IEEE International Conference for Semantic Computing (ICSC) Demonstrations*, 2011.

- **Nitin Madnani**, Joel Tetreault, Martin Chodorow and Alla Rozvoskaya. They Can Help: Using Crowdsourcing to Improve the Evaluation of Grammatical Error Detection Systems. *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics (ACL) - Short Papers*, 2011.
- Jimmy Lin, **Nitin Madnani** and Bonnie Dorr. Putting the User in the Loop: Interactive Maximal Marginal Relevance for Query-Focused Summarization. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) - Short Papers*, 2010.
- **Nitin Madnani** and Jimmy Lin. The Python and The Elephant: Large Scale Natural Language Processing with NLTK and Dumbo. *Proceedings of the Eighth Annual Python Conference (PyCon)*, 2010.
- **Nitin Madnani**, Philip Resnik, Bonnie Dorr and Richard Schwartz. Are Multiple Reference Translations Necessary? Investigating the Value of Paraphrased Reference Translations in Parameter Optimization. *Proceedings of the Eighth Conference of the Association for Machine Translation in the Americas (AMTA)*, 2008.
- Saif Mohammad, Bonnie J. Dorr, Melissa Egan, **Nitin Madnani**, David Zajic, and Jimmy Lin. Multiple Alternative Sentence Compressions and Word-Pair Antonymy for Automatic Text Summarization and Recognizing Textual Entailment. *Proceedings of the Text Analysis Conference (TAC)*, 2008.
- **Nitin Madnani**, Jimmy Lin, and Bonnie Dorr. TREC 2007 ciQA Task: University of Maryland. *Proceedings of the Sixteenth Text Retrieval Conference (TREC)*, 2007.
- **Nitin Madnani**, David Zajic, Bonnie Dorr, Necip Fazil Ayan and Jimmy Lin. Multiple Alternative Sentence Compressions for Automatic Text Summarization. *Proceedings of the Document Understanding Conference (DUC)*, 2007.
- David Chiang, Adam Lopez, **Nitin Madnani**, Christof Monz, Philip Resnik and Michael Subotin. The Hiero Machine Translation System: Extensions, Evaluation, and Analysis. *Proceedings of the Conference on Human Language Technology and Empirical Methods in Natural Language Processing (HLT/EMNLP)*, 2005.

Workshops

- **Nitin Madnani**, Jill Burstein, John Sabatin and Tenaha O'Reilly. Automated Scoring of a Summary-Writing Task Designed to Measure Reading Comprehension. *Proceedings of the 8th Workshop on Innovative use of NLP for Building Educational Applications (BEA)*, 2013.
- Aoife Cahill, Martin Chodorow, Susanne Wolff and **Nitin Madnani**. Detecting Missing Hyphens in Learner Text. *Proceedings of the 8th Workshop on Innovative use of NLP for Building Educational Applications (BEA)*, 2013.
- Michael Heilman and **Nitin Madnani**. ETS: Domain Adaptation and Stacking for Short Answer Scoring. *Proceedings of the 7th International Workshop on Semantic Evaluation (SemEval)*, 2013.
- Michael Heilman and **Nitin Madnani**. HENRY-CORE: Domain Adaptation and Stacking for Text Similarity. *Proceedings of the Second Joint Conference on Lexical and Computational Semantics (*SEM)*, 2013.
- Michael Heilman and **Nitin Madnani**. ETS: Discriminative Edit Models for Paraphrase Scoring. *Proceedings of the 6th International Workshop on Semantic Evaluation (SemEval)*, 2012.
- **Nitin Madnani**, Joel Tetreault and Martin Chodorow. Exploring Grammatical Error Correction with Not-So-Crummy Machine Translation. *Proceedings of the 7th Workshop on Innovative use of NLP for Building Educational Applications (BEA)*, 2012.

- Kristen Parton, Joel Tetreault, **Nitin Madnani**, Martin Chodorow. E-rating Machine Translation. *Proceedings of the EMNLP Workshop on Machine Translation (WMT11)*, 2011.
- Bob Krovetz, Paul Deane and **Nitin Madnani**. The Web is not a PERSON, Berners-Lee is not an ORGANIZATION, and African-Americans are not LOCATIONS: An Analysis of the Performance of Named-Entity Recognition. *Proceedings of the ACL Workshop on Multiword Expressions: From Parsing and Generation to the Real World*, 2011.
- **Nitin Madnani**, Jordan Boyd-Graber and Philip Resnik. Measuring Transitivity using Untrained Annotators. *Proceedings of the First NAACL Workshop on Creating Speech and Language Data With Amazons Mechanical Turk*, 2010.
- Matthew Snover, **Nitin Madnani**, Bonnie Dorr and Richard Schwartz. Fluency, Adequacy, or HTER? Exploring Different Human Judgments with a Tunable MT Metric. *Proceedings of the Fourth ACL Workshop on Statistical Machine Translation (WMT)*, 2009.
- Matthew Snover, **Nitin Madnani**, Bonnie Dorr and Richard Schwartz. TERp: A System Description. *Proceedings of the First NIST Metrics for Machine Translation Challenge (MetricsMATR)*, 2009.
- **Nitin Madnani** and Bonnie Dorr. Combining Open-Source with Research to Re-engineer a Hands-on Introductory NLP Course. *Proceedings of the Third ACL Workshop on Issues in Teaching Computational Linguistics (TeachCL)*, 2008.
- **Nitin Madnani**, Necip Fazil Ayan, Philip Resnik, Bonnie Dorr. Using Paraphrases for Parameter Tuning in Statistical Machine Translation. *Proceedings of the Second ACL Workshop on Statistical Machine Translation (WMT)*, 2007.
- **Nitin Madnani**, Rebecca Passonneau, John Conroy, Necip Fazil Ayan, Bonnie Dorr, Judith Klavans, Dianne O'Leary and Judith Schlesinger. Measuring Variability in Sentence Ordering for News Summarization. *Proceedings of the Eleventh European Workshop on Natural Language Generation (ENLG)*, 2007.

Posters

- **Nitin Madnani**, Philip Resnik, Bonnie Dorr and Richard Schwartz. Applying Automatically Generated Semantic Knowledge: A Case Study in Machine Translation. *Proceedings of the NSF Symposium on Semantic Knowledge Discovery, Organization and Use*, 2008.
- Catherine Plaisant, **Nitin Madnani**, Matt Kirschenbaum, Martha Nell Smith, Tanya Clement and Greg Lord. Exploring Emily Dickinson Letters. *Proceedings of the 22nd Annual Human-Computer Interaction Lab Symposium*, University of Maryland, 2005.
- **Nitin Madnani**, Necip Fazil Ayan, Bonnie Dorr, Nizar Habash, Christof Monz. Portable Divergence Unraveling: The Case of Hindi. *Research Review Day*, University of Maryland, 2004.

Working Papers

- A Pythonic Exploration of Vector Space Methods for Semantic Similarity.
  Article in preparation.

Unpublished Manuscripts

- EMILY: A Tool for Visual Poetry Analysis, 2005.
- Active Learning for Mention Detection: A Comparison of Sentence Selection Strategies, 2005.

Previous Research Experience

Research Assistant, University of Maryland Institute for Advanced Computer Studies, Laboratory for Computational Linguistics & Information Processing, 2004–2010

Sentential Paraphrase Generation

- Designed, developed and implemented a novel, feature-driven computational model for automatically paraphrasing any given sentence in any language to another semantically equivalent sentence. The model is particularly appropriate for use in other language processing applications (see *Machine Translation* below).
- Conducted human studies using Amazon Mechanical Turk in order to understand how humans perceive semantic equivalence at the sentence level and to explore how this perception compares with the computational model.

Machine Translation

- Participated in the development of a rule-based framework (`DUSTer`) to unravel cross-linguistic *divergences*—naturally occurring instances wherein the same underlying concept is distributed over different words between two natural languages—that can confound the process of automatic translation.
- Ported `DUSTer` to an entirely new language pair (Hindi-English) as part of the DARPA Translingual Information Detection, Extraction and Summarization (TIDES) program.
- Ported a popular machine learning algorithm used to automatically learn the system parameters of a statistical machine translation system from Perl to C using the `Inline::C` perl module. The implementation was used in a state-of-the-art translation system that was ranked highly at the Annual NIST Machine Translation Evaluation in 2005.
- Integrated sentential paraphrasing model (described above) with a state-of-the-art machine translation system to solve a significant research problem in current translation methods: the requirement of *multiple* reference translations for automatically learning the system parameters using the algorithm above. Use of said model led to a statistically significant, empirically verified gain in system performance.
- Designed and co-authored a state-of-the-art metric (`TERp`), written in `Java`, used by the research community to evaluate output of machine translation systems. `TERp` improves upon a previously existing metric by incorporating semantic enhancements like synonyms and paraphrases. The metric was judged to be the top-performing metric at the NIST Machine Translation Metrics Challenge in 2008.
- Developing next generation machine translation systems for the DARPA Global Autonomous Language Exploitation (GALE) program as a member of a research consortium led by BBN Technologies.

Automated Text Summarization

- Refined an existing multi-document summarization system (`TRIMMER`) that generates summaries by extracting relevant sentences and compressing them. The main refinement was implementing a novel method for automatically finding the set of feature weights that maximize system performance and was ranked 2^{nd} at the Document Understanding Conference (DUC) organized by NIST in 2007.
- Redesigned and reimplemented `TRIMMER` so that it could be run more efficiently on a 20-node PBS cluster.
- Determining the right order for sentences in a multi-document summary is a non-trivial problem. Conducted extensive human studies to better understand how sentences in a summary should be ordered so as to maximize its coherence.

Information Retrieval

- Developed and implemented a simulated interactive question answering system to understand how introducing elements of interaction, such as clarification questions, can improve retrieval performance. The system was evaluated in the ciQA (complex interactive question answering) task at the Text Retrieval Conference organized by NIST in 2007.

Text Visualization

- Developed and implemented the first prototype of `EMILY`, a tool for visualization and analysis of Emily Dickinson's poetry. The tool was developed in collaboration with and the Human Computer Interaction Lab (HCIL) and Maryland Institute for Technology in the Humanities (MITH). It has since been developed further and is being used by humanists in several institutions.

Research Intern, IBM T J Watson Research Center, Natural Language Group, Summer 2005

- Worked on the **MALACH** (Multilingual Access to Large Spoken Archives) project aimed at automatically extracting information from 116,000 hours of digitized interviews in 32 languages from 52,000 survivors, liberators, rescuers and witnesses of the Nazi Holocaust. The extraction system is trained on parts of archives that have been manually annotated.
- Developed and tested active learning strategies to improve the performance of the information extraction system. The best strategy reduces the human annotation required by 50% without affecting the system performance.

Research Intern, Embedded Systems Group, Netrino LLC, Summer 2002

- Wrote Application and System software for the TERN A-CORE board with the AMD188ES microprocessor, and for the low power ECOG1 Microcontroller—which was used in "Embedded Programming 101" at the Embedded Systems' Conference held in 2002.
- Ported Quantum Framework—a C++ framework to program embedded systems using UML Statecharts—to `Micro/C-OS2`, a real-time preemptive kernel.
- Designed and coded a temperature-estimating cricket emulator that varies its chirp rate according to the microprocessor core temperature, on the Cyan Technologies' low power communication processor (ECOG1). Wrote device drivers for the analogue speaker interface.
- Conducted background research for *Embedded Systems Dictionary*, published by CMP Books in 2003 (ISBN: 15782012090).

Teaching Experience

Instructor, Computational Linguistics I, Department of Computer Science, University of Maryland (Fall 2007, Fall 2008)

- Redesigned the entire course curriculum to cater to a diverse audience (both **graduate** and **undergraduate** students from Computer Science & Linguistics). It has been used as the default curriculum for every iteration of the course since then.
- Designed and delivered lectures on several language processing topics such as Part-of-Speech Tagging, Hidden Markov Models, Expectation Maximization, N-gram Language Modeling, Non-CFG Parsing Models.
- Developed and created homework assignments and programming projects using Python and NLTK (Natural Language Toolkit) that allowed students to imbibe course concepts in a hands-on fashion.
- Created and monitored an online forum to answer students' questions promptly and in detail.
- Guided the assigned teaching assistant(s) on how to grade homeworks and projects.
- Received extremely positive ratings from the students at the end of the semester. Students really appreciated the curriculum design, the hands-on instructive quality of assignments and the one-on-one attention via the forum and the office hours.

Guest Lecturer, Computational Linguistics I, Department of Computer Science, University of Maryland, Fall 2009

- Designed and conducted a hands-on session to introduce students to real-world language processing using presidential state of the union addresses and congressional floor debates.

Teaching Assistant, Introduction to Natural Language Processing, Department of Computer Science, University of Maryland, Fall 2004

- Graded homeworks and projects.
- Held regular office hours to help students with homeworks, projects and the course material, in general.

Selected Oral Presentations

A Summer of (Active) Learning, Computational Linguistics Colloquium. University of Maryland, College Park, MD, September 2005.

Multiple Alternative Sentence Compressions for Automatic Text Summarization. Document Understanding Conference. Rochester, NY, April 2007.

Measuring Variability in Sentence Ordering for News Summarization. European Workshop on Natural Language Generation. Schloss Dagstuhl, Germany, June 2007.

Using Paraphrases for Parameter Tuning in Statistical Machine Translation. Workshop on Statistical Machine Translation. Annual Meeting of the Association for Computational Linguistics. Prague, Czech Republic, June 2007.

Using Paraphrases for Parameter Tuning in Statistical Machine Translation. Invited talk. Annual Technical Meeting for Global Autonomous Language Exploitation. San Francisco, CA, June 2007.

Using Open-Source and Research to Re-engineer a Hands-on Introductory NLP Course. Workshop on Issues in Teaching Computational Linguistics. Annual Meeting of the Association for Computational Linguistics. Columbus, OH, June 2008.

Investigating the Value of Paraphrased Reference Translations in Parameter Optimization. Conference of the Association for Machine Translation in the Americas. Waikiki, Hawaii, October 2008.

Applying Automatically Generated Semantic Knowledge: A Case Study in Machine Translation. NSF Symposium on Semantic Knowledge Discovery, Organization and Use. New York University, NY, November 2008.

The Circle of Meaning: From Translation to Paraphrasing and Back. Invited talk. CUNY-NLP: Computational Linguistics and Natural Language Processing Seminar. CUNY Graduate Center, NY, February 2010.

Using Statistical Machine Translation to Improve Statistical Machine Translation. Invited talk. Yahoo! Data Sciences Seminar. Rutgers University, NJ, November 2011.

Getting Started on Natural Language Processing with NLTK. Invited talk. Princeton Knowledge Engineering Group. Princeton, NJ, February 2012.

Identifying High Level Organization Elements in Argumentative Discourse. Conference of the North American Chapter of the Association for Computational Linguistics. Montréal, Canada. June 2012.

Open Source Software

Primary Developer, *Interactive BLEU*
`http://ibleu.googlecode.com`

A project that uses state-of-the-art web technologies (HTML5, CSS and Javascript) to provide a visual and interactive way to score machine translation output. It runs locally in the user's browser and includes all external dependencies. It also allows users to query Google Translate and Bing Translator for comparison.

Primary Developer, *ParaQuery*
`http://github.com/desilinguist/paraquery`

A tool that helps a user interactively explore and characterize a given pivoted paraphrase collection, analyze its utility for a particular domain, and compare it to other popular lexical similarity resources all within a single interface.

Primary Developer. *Scripting Language Model Interface*
`http://github.com/desilinguist/swig-srilm`

A general purpose interface to popular language modeling toolkits (SRILM & IRSTLM) that allows reading and querying these language models *directly* in Python, Perl and most other scripting languages. In use by NLP research groups at University of Illinois Urbana Champaign, Simon Fraser University (Canada), Institute for Mathematical Sciences (India) and Nara Institute for Science and Technology (Japan).

Primary Developer. *Websocket Stanford Tagger*
`http://github.com/desilinguist/websocket-tagger`

A project that provides a WebSocket server that wraps the Stanford Part-of-Speech tagger. This makes it easier to get part-of-speech tags from JavaScript for arbitrary text. Please note that this project is just a prototype that illustrates the utility of WebSockets for NLP.

Developer & Project Member, *Natural Language Toolkit*
`http://www.nltk.org`

A community driven suite of Python modules, data and documentation for research and development in natural language processing. Personal contributions include development of new modules, inclusion of new data and several bug fixes and improvements. NLTK is widely used in pedagogy and a list of courses using it can be found at `http://www.nltk.org/courses`.

Developer, *SciKit-Learn Laboratory (SKLL)*
`https://scikit-learn-laboratory.readthedocs.org/`

SKLL (pronounced skull) provides a number of utilities to make it simpler to run common scikit-learn experiments with pre-generated features.

Developer, *UMIACS Word Alignment Interface*
`http://github.com/desilinguist/wordalignui`

A Java-based tool for creating and viewing word alignments between language pairs. It has been widely used across the community to create alignments for many language pairs including Hindi-English, Welsh-English, Swahili-English, Czech-English and Chinese-English.

Primary Developer. *Light-weight Language Model Server*.

A Python-based XML-RPC server for language models that allows multiple clients to query the *same* language model loaded in server mode.

Principal Service Activities

Peer Mentor, Department of Computer Science, University of Maryland, 2007–2008

Referee

- *ACM Transactions on Intelligent Systems and Technology*.
- *Journal of Artificial Intelligence Research*.
- *Journal of Machine Translation*.
- *Computational Linguistics*.
- *Transactions of the Association for Computational Linguistics*.

Program Committee Member

- *Conference of the Association for the Advancement of Artificial Intelligence (AAAI)*, [2012-2013]
- *Conference of the North American Chapter for the Association for Computational Linguistics (NAACL)*, [2009, 2012-2013]
- *Conference of the Association for Computational Linguistics (ACL)*, [2010-2013].
- *Conference on the European Chapter of the Association for Computational Linguistics (EACL)*, [2009, 2012].
- *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, [2009-2012] (Awarded Best Reviewer for Machine Translation track).
- *Workshop on Innovative Use of NLP for Building Educational Applications*, [2011-2013].
- *International Conference on Computational Linguistics (COLING)*, 2010.
- Numerous workshops organized by the Association for Computational Linguistics and collocated with the above conferences.

Reviewer

- *Conference of the Association for Machine Translation in the Americas (AMTA)*, 2008
- *Annual Meeting of the Association for Computational Linguistics (ACL)*, 2007
- *International Joint Conference on Natural Language Processing (IJCNLP)*, 2005

Awards & Scholarships

National Talent Search Examination Award, India, 1993

Merit Scholarship, Punjab Engineering College, Panjab University, 1997–2000

Graduate Research Assistantship, University of Maryland, 2004–2010

Jacob K. Goldhaber Travel Grant, University of Maryland, 2005

Professional Affiliations

Sigma Xi, The Scientific Research Society (Full Member, Invitation Only)

Association for Computing Machinery (ACM)

ACM Computer Science Teachers Association (CSTA)

Association for Computational Linguistics (ACL)

ACL Special Interest Groups on Machine Translation (SIGMT), Natural Language Generation (SIGGEN) and Computational Semantics (SIGSEM).

References

Available on request.

Skills

C/C++, Java, LaTeX, Matlab, Perl, Python, R, Ruby.

Unix, Linux, MS-DOS, MS-Windows, Mac OS X.

Fluent spoken/written English, Hindi; fair spoken Punjabi and Sindhi.