

**MOHIT KUMAR****OBJECTIVE**


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Continuation of PhD studies at Carnegie Mellon University

**RESEARCH INTERESTS**


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Summarization, Natural Language Processing, Machine Learning, Speech Technologies

**EDUCATION**


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PhD Candidate Language Technologies Institute School of Computer Science	Aug'06-present	Carnegie Mellon University
Master of Science Language Technologies Institute School of Computer Science	Aug'04-May'07	Carnegie Mellon University
Bachelor of Technology (Hons.) in Computer Science and Engineering	1998-2002	IIT Kharagpur

**RESEARCH/WORK EXPERIENCE**


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**1. Graduate Research Assistant, Project RADAR, advisors: Dr. Alexander I. Rudnicky & Dr. Jaime Carbonell, Carnegie Mellon University – Aug' 04 – present**

- Working on the Briefing Assistant specialist under the RADAR project (<http://www.radar.cs.cmu.edu/>). In particular, I am interested in the problem of summarization which involves abstracting information from the given text, for e.g. a set of emails, or a set of events in the form of a concise briefing. We have currently developed a report writing system that summarizes task-based event information and uses templates for presenting the report to the user.
- It has been a great learning experience as I am the point of contact for our group. I have led our research, development, integration and testing initiative which has involved extensively interacting with other groups in RADAR.

**2. Research Associate(Intern), Accenture Technology Lab(Chicago) – Mar'08 – present**

- In continuation with the report writing system at CMU, I am working on developing a similar system for the call-center log data at Accenture. This work is for data collection for my PhD thesis.
- Working on developing a Proposal Writing Assistant that helps in reusing the existing knowledge in the enterprise and improves productivity.

**3. Technical Staff Member, IBM India Research Lab (Delhi) – Aug'03 – Aug'04**

- Worked on building an Indian English Text-to-Speech system.
- Explored the implication of speech technologies on pervasive devices, addressing the problem of speech application adaptation by dialog call-flow reorganization for pervasive devices with different memory constraints.

**4. Research Trainee, Speech Group, IBM India Research Lab (Delhi): July'02 – Aug'03**

- Worked on building a continuous speech, speaker-independent Hindi Speech Recognition (Desktop application) system. Main contribution had been to develop a novel technique of generating phonetic spellings of words to build the vocabulary in the system.

## PUBLICATIONS

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- M. Kumar, D. Das, A. I. Rudnicky, "A System for Recommending Briefing Drafts from Non-textual Events", International Workshop on Recommendation and Collaboration (ReColl), in conjunction with IUI 2008, Canary Islands, Spain, Jan'08.
- M. Kumar, D. Das, A. I. Rudnicky, "Automatic Extraction of Briefing Templates", International Joint Conference on NLP (IJCNLP), Hyderabad, India, Jan'08.
- M. Kumar, D. Das, A. I. Rudnicky, "Summarizing Non-textual Events with a 'Briefing' Focus", Recherche d'Information Assistée par Ordinateur (RIAO), Pittsburgh, USA, May 30 - Jun 1, 2007.
- M. Kumar, N. Garera, A. I. Rudnicky, "Learning from the Report-writing Behavior of Individuals", International Joint Conference on Artificial Intelligence (IJCAI), Hyderabad, India, Jan'07.
- M. Kumar, N. Garera, A. I. Rudnicky, "A Briefing Tool that Learns Individual Report-writing Behavior", IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Washington, DC, Nov'06.
- D. Huggins-Daines, M. Kumar, A. Chan, M. Ravishankar and A. I. Rudnicky, "POCKETSPHINX: A Free, Real-time Continuous Speech Recognition System for Hand-held devices", ICASSP, Toulouse, France, May'06.
- M. Kumar, N. Rajput, A. A. Nanavati, P. Kankar and R. Dahiya "SAMVAAD: Speech Application Made Viable for Access-Anywhere Devices", IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMOB), Montreal, Canada, Aug'05.
- M. Kumar, N. Rajput and A. Verma, "A large vocabulary continuous speech recognition system for Hindi", *IBM Journal of Research and Development*, 2004.

## PATENT

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"A System and Method for Device-specific Dialog Call-flow Optimisation". Filed with USPTO – April, 2004.

## SELECTED COURSEWORK (CMU)

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Machine Learning(Dr. Roni Rosenfeld)	Read The Web(Dr. Tom Mitchell)
Information Extraction(Dr. William Cohen)	Language and Statistics(Dr. Roni Rosenfeld)
Information Retrieval(Dr. J. Callan & Dr Y. Yang)	Algorithms for NLP(Dr. Alon Lavie)
Computational Structural Biology(Dr. C. Langmead)	Grammars and Lexicons(Dr. L. Levin & Dr. T. Mitamura)
Spoken Dialog Lab(Dr A. Rudnicky & Dr. A. Black)	
Inventing the Future of Services (Dr Anatole Gershman)	Analysis of Social Media(Dr William Cohen & Dr. Natalie Glance - Google Pittsburgh)

## COMPUTER SKILLS

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*Languages:* C, C++, JAVA, Perl, XML, TCL/TK

*Tools & Packages:* Eclipse, WEKA (Machine Learning Package), Minorthird (Information extraction package), PBS (Job queuing system for Clusters), Ravenclaw (CMU's framework for complex dialog systems), Tomita V8-4 LR parser (a Natural language parser), CMU NLP toolkit.

*Operating Systems:* Linux, Unix, MS Windows.

## ACADEMIC ACHIEVEMENTS

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1. IBM First Patent Application Invention Achievement Award, April 2004.
2. Secured All India Rank 146 out of 1,20,000 candidates (approx.) in the Indian Institute of Technology's Joint Entrance Examination, one of the toughest undergraduate level admission examination in India.

## EXTRACURRICULAR ACTIVITIES

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1. Student representative to the faculty for the Master's program 2004-05, was the spokesperson of the Student Activities Committee, LTI, Carnegie Mellon University until Dec'08.
2. Was the Sponsorship chair of the Indian Graduate Student Association at CMU. Have been instrumental in establishing the Association on campus over the past few years.
3. Captain of CMU Squash League 'C' team. Were champions for the previous two years: 2004-05, 2005-06; runners-up:2006-07. Won the CMU Intra-mural Ultimate Frisbee Championship 2005-06.
4. Coordinator of the "Innovation Curriculum" – an IBM Research worldwide activity during the "Innovation Week-2004" of IBM Research.
5. President of Computer Science & Engineering Dept. Society, I.I.T. Kharagpur, in my Senior Year and held the post of General Secretary in Junior year.
6. Conceptualised *BiWISE*, an international programming contest held by the CSE Department Society, in 2001 and conducted it again in 2002 as the President.
7. Represented IIT Kharagpur in Badminton at Inter IIT sports meet.
8. Captain of R.P. Hall of Residence's badminton team (2002) and a senior member of its Hockey team, currently member of the SCS Intra-mural Floor Hockey team, CMU.
9. Captain of R.P. Hall of Residence's Hindi Dramatics team (2002) and a senior member of English Dramatics & Choreography team.

## HOBBIES

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- Numismatics
- Playing Squash, Badminton, Hockey, Table Tennis, Volley Ball, Ultimate Frisbee
- Adventure Sports, Hiking
- Dancing

## REFERENCES: AVAILABLE UPON REQUEST

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