

# Siddharth Mitra

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🌐 <http://sidm.appspot.com>

Profile	I am interested in web technologies and web application development, while my research interests lie primarily in <b>Social Network Analysis</b> and <b>Data Mining</b> .		
Education	Indian Institute of Technology, Delhi, India	GPA: <b>7.8</b>	
	M.Tech. in Computer Science and Engineering, expected graduation: 2009.		
	Vellore Institute of Technology, Vellore, India	GPA: <b>8.6</b>	
	B.Tech. in Information Technology, 2007.		
Work	Teaching Assistant	Jun '07 - Present	
	Indian Institute of Technology	Delhi, India	
	<ul style="list-style-type: none"><li>· Introduction to Database Systems (Undergraduate level)</li><li>· Introduction to Logic and Functional Programming (Graduate)</li><li>· Advanced Computer Graphics (Graduate)</li></ul>		
	Project Intern	Dec '06 - May '07	
	Honeywell Technology Solutions Lab Pvt. Ltd.	Bangalore, India	
	<ul style="list-style-type: none"><li>· Deployment of Knowledge Network over Microsoft Office Sharepoint Server(MOSS) 2007</li><li>· Assigned an additional project in a team of four, for the development, design, testing of a “Digital Forms 2.0” prototype, an inhouse workflow application over the Sharepoint platform</li><li>· Custom web parts for MOSS 2007</li><li>· Custom actions for customizing SharePoint designer</li><li>· Custom workflows using Windows Workflow Foundation(.Net 3.0)</li></ul>		
Projects	Popularity Dynamics in Online Video Sharing	Jul '08 - Present	
	Modelling of access patterns of videos, evolution of their popularity, along with the growth trends of their uploaders and their social network. The work is based on traces of data containing around 3 million videos and snapshots collected over 5 months from YouTube, Dailymotion, Metacafe etc.		
	Characterizing Web-based Video Sharing Workloads	Jan - May '08	
	Identifying invariants and differences in video popularity distributions, and statistical analysis of static meta data across four major video sharing services.		
	Online Content Aggregation and Filtering on a Social Network	Apr '08	
	Studying the effect of user rank on the popularity of the content posted by him. Involved studying a user submitted news site <i>Reddit</i> , to characterize user behaviour on such social networks.		
	Non Photo-realistic Rendering	Sep '08	
	Conversion of any photo-realistic image to non photo-realistic(NPR) one using colour segmentation by region growing. Also developed an NPR specific compression format based on the baseline JPEG standard.		
	Benchmark of High Performance Heaps	Nov '07	
	Performance comparison of heaps such as Binary, Binomial and Fibonacci using Prim's and Fredman-Tarjan's minimum spanning tree computation of graphs, with millions of nodes.		

**Publications**

- Mitra, S *et.al.* "Characterizing Web-based Video Sharing Workloads." Poster to be presented as part of WWW '09.
- Complete version of the same submitted to ACM Transactions on the Web.

**Technical Skills**

**Languages:** Python, C, C++, Java, SML, exposure to 8086 Assembly  
**Web Technologies:** Django, ASP, Javascript, HTML, CSS, XML, exposure to PHP  
**Databases:** SQL, MySql 5, SQLite, Oracle 9i  
**Statistics:** Matlab, R, Numpy + Scipy (Python)  
**Libraries and Tools:** Boost, FLTK, Emacs, L<sup>A</sup>T<sub>E</sub>X, GCC, GDB, Make

Considerable experience in writing large scale web crawlers and scrapers using Python (urllib or mechanize), along with handling large data sets with over a billion rows.

**Achievements**

- Won Yahoo's 'Hack U', a team based web application development event held at IITD in Feb 2009.
- All India Rank 6 in Graduate Aptitude Test in Engineering(GATE) 2007.
- All India Rank 292 in GATE 2006.
- Monthly scholarship from the Ministry of HRD, India.
- Silver Merit Certificate at the 1st National Cyber Olympiad.
- Scholastic Writing Awards 2002 certificate in the short story category.

**References**

Dr. Anirban Mahanti, Assistant Professor, IIT Delhi  
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