

# Debangsu Sengupta

Education	<b>Stanford University, CA</b> <ul style="list-style-type: none"><li>M.S. Computer Science with research</li><li><b>Research:</b> <a href="#">PrPI</a> / <a href="#">POMI</a> project. The project goal is to build a semantic, collaborative data management system targeted at mobile devices. Publication: A person-centric, distributed social-networking infrastructure for sharing private and public data using active intermediaries. Submitted to WWW2009. Supervised by Professor Monica Lam.</li><li><b>Courses:</b> Computer and Network Security; Programmable Open Mobile Internet (POMI); Research Project in Computer Systems and Security; Databases; Cryptography; Bio-medical informatics – Fundamental methods; Clean-slate Networking; Software as a service; GSB: Evaluating Entrepreneurship Opportunities; Entrepreneurial Thought Leaders.</li><li><b>Projects:</b> PrPI: <a href="#">Identity Management (OpenID)</a>, <a href="#">Semantic Attribute-based Access Control</a>, <a href="#">Customized, Personal Feeds</a>, <a href="#">Social Reviews Service</a>. Report on Mobility Management in cellular networks.</li></ul>	Expected graduation: June 2009
	<b>University of Illinois at Urbana-Champaign, IL</b> <ul style="list-style-type: none"><li><b>Graduate Course:</b> Software Engineering II. GPA: 4.0 / 4.0</li><li><b>Project:</b> Dev Manager at <a href="#">Project Niche</a> – a location-based real-estate and job search web service. Managed team members in several time zones in the US and South Korea.</li></ul>	January – May 2006
	<b>University of Massachusetts, Amherst, MA</b> <ul style="list-style-type: none"><li>B.S. Computer Science (Honors – Magna Cum Laude). GPA: 3.78/4.00</li><li><b>Honors Courses:</b> Programming Paradigms, Software Engineering, Databases.</li><li><b>Undergraduate Honors Thesis:</b> <a href="#">Issues in Machine Translation Model in Automatic Image Annotation</a></li><li>Poster presentation at the 9<sup>th</sup> <b>Annual Massachusetts Undergraduate Conference</b>. Awarded <b>Honors Research Fellowship</b> from Honors Commonwealth College, UMass.</li><li><b>Honors Projects:</b> Lead – Audio racing game for blind players; business plan for a distance learning start-up; E-library web service; information retrieval project.</li></ul>	Sept 1999 - May 2003
Relevant Experience	<b>Microsoft Corp.</b> Office Communication Server (OCS) 2007, LCS 2005, Data Protection Manager (DPM) V1 Software Engineer : Sep 03 – Sep 07 <ul style="list-style-type: none"><li>Leadership: Represented OCS team in product-wide Security push. Helped develop a comprehensive, team-wide Security plan covering training, implementation, triage and processes for upcoming releases. Developed a C# Fuzzing library. Participated in product code reviews; security threat modeling. Delivered presentations to the team and management. Initiative recognized internally at Microsoft. I was recognized to be in the top 15% of the team.</li><li>Mentoring: Served as official mentor and unofficial mentor to one and five teammates respectively. Routinely delivered presentations on topics in C# development e.g. .Net Eventing, Generics</li><li>Responsible for interviewing and making candidate recommendations for team positions in Seattle and India.</li><li>Technical resource for multiple components for LCS 2005, LCS 2005 SP1, Office Communicator and OCS 2007 releases e.g. Deployment/Management for Standard/Enterprise Edition, Web Components, Edge Server, Proxy Server, Web Conferencing, Audio-Video Conferencing. DPM: Technical resource for components like Shadow Copy Task Executor, Events, Notification Manager.</li><li>Designed and developed XML and XSLT based solutions for automation frameworks. Developed expertise in debugging techniques and introduced initiatives like fault injection.</li><li>Delivered a detailed new user guide including documentation, best practices and sample code to train team members on SCM/build system, and automated frameworks. Delivered presentations and provided live training.</li><li>Participated in a cross-group panel discussion on Design Patterns. Participated in team-wide initiatives such as Code Coverage analysis. Instituted regular code review practices within the team.</li></ul>	
	<b>Microsoft Corporation</b> MSN Core Software Engineer Intern: May-August 2002 <ul style="list-style-type: none"><li>Designed and developed a .NET application that validated functionality of core integration components across MSN properties like Hotmail, Passport, Messenger, Alerts, Groups.</li></ul>	
	<b>Center for Intelligent Information Retrieval, UMass</b> Research Assistant: September 2001-May 2003 <ul style="list-style-type: none"><li>Developed Java modules for web-based question-answering system; automatic image annotation thesis.</li></ul>	
	<b>EMC Corporation</b> Array Software Engineering Tools Group Co-op: June-October 2001 <ul style="list-style-type: none"><li>Designed and implemented an internal web publishing system that utilized SCM, load balancing and uniform access control over diverse platforms. Focused on researching and writing new tools for internal usage.</li></ul>	

- Supported the developing environment of Midrange Systems (Clariion) information storage products and solutions.

**Thinkquest International Internet Challenge** Project leader, webmaster, mentor: December 1996-2002

- Led numerous 3-member int'l school teams in developing highly popular (15 million hits+), interactive, comprehensive, educational web resources (hundreds of pages each) that won top global prizes (approx USD 40,000 in scholarships/awards) and received coverage in international media including CNN, BBC.
- Developed front and backend web components; worked across 11 time zones; each year's project was approx 9 months long per team; mentored numerous international teams concurrently.
  - Himalayas—Where Earth Meets Sky (<http://library.thinkquest.org/10131/?tqskip1=1>). *Best of Contest 1997*.
  - Van Gogh At Etten. *Platinum award Thinkquest International 2000, Top 5 globally in contest; 1<sup>st</sup> Place, Art Award Thinkquest Netherlands 2000*.
  - The Living Africa (<http://library.thinkquest.org/16645>). *Second place 1998*.
  - Pollution: Global Threat (<http://library.thinkquest.org/C0111040/>). *Achievement award 2001*.
  - Addiction: From Craving ... (<http://library.thinkquest.org/C0117845>). *Achievement award 2001*.
  - Africa – The Cradle of Civilization *Semifinalist 2000*.
  - Discovering China (<http://library.thinkquest.org/26469>). *Silver Award 1999*

**AfricaOnline Cote D'Ivoire** – <http://www.africaonline.co.ci> Intern: April 1999

- Developed front and backend components, graphics design on ongoing live web projects in French.

## Projects

- Emerging Markets Project:** Served as technical resource for writing a business plan for developing sustainable, Microsoft –sponsored IT kiosks in rural India. Work published by AED.
  - LSFuzzLib for Security Fuzzing (C#):** Developed a library to enable automated dumb and smart fuzzing of various components in the product. Used Generics, Collections. Delivered presentations, sample code.
  - Infrastructure for OCS Manageability (C#):** Developed infrastructure for several components. Used .Net 2.0 features like C# Generics, Collections, Reflection, along with XML/XSLT technologies to auto-generate code.
  - Infrastructure for Shadow Copy, Events, Notifications (C#):** Developed infrastructure code shared among Events and Notifications components in DPS. Utilizes .Net Remoting for a managed remote service. Employed non destructive means (e.g. method overloads) to enable future integration with existing code base.
  - MSN Core Tool for Validating Functionality and uptime (C#):** Programmatically simulated user scenarios across integration points across diverse MSN properties.
  - EMC intranet front and backend tools:** Implemented a system that utilizes Rational Clearcase SCM software to publish web content under source control with Perl-based uniform access control over diverse platforms and web servers; configured Apache httpd's with Squid server (as transparent reverse proxy) and redirector to provide single point of access to end users and reduce load from backend web servers.
  - Racing game for the blind (Java):** Led a 4 member team through a software lifecycle in developing the audio interface of a racing game for blind players. Demo'ed to 70 students.
  - Thinkquest web application development:** Developed components, contents, graphics for several popular web resources using HTML, CGI/Perl, SSI, XML, Java, Javascript, PHP, Mysql. Successfully led and managed numerous 3 person student teams from diverse cultures, schedules, time zones.
  - Image Recognition Honors Thesis (Matlab):** Deployed probabilistic models on features extracted from images segments in order to improve performance in automatic image recognition and retrieval.
  - Information Retrieval Honors Project (Java):** Wrote Java modules for use in an ongoing research project aimed towards developing a prototype for question answering based on results from commercial web search engines. 2 person team.
  - Graduate Networking Labs:** Studied, configured and measured the internals of several network protocols in an air-gap network using Cisco routers, switches and Linux machines. Series of 10 labs. 2 person team.
  - Robots board game (Java):** Robots hunt for targets in the shortest possible time on a game board with obstacles. Demonstrated concepts like thread scheduling and search. 2 person team.
  - E-Library (PHP/Mysql):** Web-based feature-rich library system with online reservation. Demonstrated relational database concepts and gained experience in web technologies. 4 person team.
- Microsoft Courses
- Engineering Excellence for Microsoft Developers; C++ Programming; Basics of Secure Software; Windows NT/2000/XP/Server 2003 OS Internals; Debugging Introduction; Debugging .NET/Windows Applications.
- Computer Experience
- OS: Windows Vista/2003/XP, Linux, MacOS, DOS, Cisco IOS.
  - Apps: Visual Studio .NET, Product Studio, IntelliJ/Eclipse, JUnit, AppVerify, Windbg, Ethereal, Matlab.
  - Programming: C#/Java/C/C++, SQL, Perl, HTML/XML, Lisp, Javascript. *Protocols:* TCP/IP, SIP, ARP, RIP, OSPF, BGP, DHCP.
- Honors
- Commonwealth College Scholar, Dean's List each semester enrolled, Graduated Magna Cum Laude., Departmental Honors, Phi Beta Kappa, Undergraduate Honors Research Fellowship. UMass. 1999 – 2003.
  - Ranked in top 150 by the National Science Talent Search Examination, India. 1996.