ANEESH SHARMA

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RESEARCH INTERESTS

Analysis of algorithms with applications to Social, Economic and Information Networks

EDUCATION

Stanford University, Stanford, CA   09/2006 – 08/2010
Ph.D., Computational and Mathematical Engineering   GPA (4.0/4.0)
Advisors: Rajeev Motwani and Tim Roughgarden

Stanford University, Stanford, CA   09/2004 – 12/2006
M.S., Computational and Mathematical Engineering   GPA (3.8/4.0)

RELEVANT COURSEWORK

Randomized Algorithms	Geometric Algorithms
Foundations of Sponsored Search	Advanced Graph Algorithms
Algorithmic Game Theory	Information Networks
Approximation Algorithms	Hardness of Approximation
Stochastic Processes	Information Theory
Discrete Mathematics and Algorithms	Convex Optimization
Computational Methods in Data Mining	Large Scale Computing
Numerical Linear Algebra	Numerical Optimization

Indian Institute of Technology, Delhi   08/1998 – 05/2002
B.Tech. Production and Industrial Engineering

RESEARCH EXPERIENCE

Theory Group, Stanford University, CA   09/2007 – Present
Research Associate

- Analysis of Algorithms for Social, Economic and Information Networks[1]

Search Group, Ravi Kumar, Yahoo Research   06/2009 – 09/2009
Summer Intern

- Development and analysis of algorithms for online learning of click-through rates[1]

Search Labs, Sreenivas Gollapudi, Microsoft Research   06/2008 – 09/2008
Summer Intern

- Development and analysis of algorithms for diversification of search results[1]

Search Quality, Paul Haahr, Google Inc   07/2007 – 09/2007
Summer Intern

- Designed and implemented a text disambiguation engine using Wikipedia
- Built an index over Wikipedia from grounds-up and designed and implemented an algorithm to resolve ambiguities among input text
- The index was subsequently used by two product teams in Google

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[1]Please refer to the relevant publication for detailed descriptions.

Geometry Group, Leonidas Guibas, Stanford University, CA   06/2006 – 06/2007
Research Associate

- Development, analysis and implementation of algorithms for reverse nearest neighbor search[1]

Stanford University Medical Media and Information Technologies (SUMMIT),   09/2004 – 04/2006
Stanford University, CA
Research Associate

- Development of an open source surgical simulation system with the Stanford - NASA Bio-computation Center (`http://spring.stanford.edu`)
- Developed and implemented algorithms for enhanced visual experience and improving software performance using faster algorithms and code optimization.

Indian Institute of Technology, Delhi   06/2002 – 08/2004
Research Associate

- Development of geometric meshes for folded airbags for use in crash simulations
- Developed and implemented a novel algorithm which minimizes change in the surface area and geometry of the airbag during folding

PUBLICATIONS[2]

- David Arthur, Rajeev Motwani, Aneesh Sharma, and Ying Xu. Pricing strategies for viral marketing on social networks. *Proceedings of the 5th Workshop on Internet and Network Economics*, pages 101–112, 2009
- Sreenivas Gollapudi and Aneesh Sharma. An Axiomatic Approach for Result Diversification. *Proceedings of the 18th International Conference on World Wide Web*, pages 381–390, 2009
- Christoph Aschwanden, Craig Cornelius, Lawrence Burgess, Kevin Montgomery, and Aneesh Sharma. Centralized Data Recording for a Distributed Surgical Skills Trainer to Facilitate Automated Proficiency Evaluation. *Medicine Meets Virtual Reality 15: In Vivo, in Vitro, in Silico: Designing the Next in Medicine*, 2007
- Sudipto Mukherjee Anoop Chawla and Aneesh Sharma. Development of FE Meshes for Folded Airbags. *International Journal of Crashworthiness*, 10(3):259–266, 2005
- Sudipto Mukherjee Anoop Chawla and Aneesh Sharma. Mesh Generation for Folded Airbags. *Computer-Aided Design and Applications*, 1(1-4):269–276, 2004

MANUSCRIPTS[2]

- Jon Kleinberg and Aneesh Sharma. Pricing Network Goods for Strategic Users, in preparation
- Aleksandra Korolova, Rajeev Motwani, and Aneesh Sharma. Caching Strategies for Social Networks, in preparation
- Satyen Kale, Mohammad Mahdian, Kunal Punera, Tamas Sarlos, and Aneesh Sharma. Learning Click-through Rates for Sponsored Search Advertisements, under submission
- David Arthur, Steve Oudot, and Aneesh Sharma. Finding Friends and Followers in Sub-linear Time, under submission

SERVICE

Reviewer for SODA, ICALP, EC, WINE, KDD and WSDM.

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[1]Please refer to the relevant publication for detailed descriptions.
[2]Many of these are available for download from my web page.

TEACHING EXPERIENCE

Vector Calculus for Engineers (Eric Darve)   10/2006 – 12/2006
Teaching Assistant (Organized sections, held problem sessions and took stand-in lectures)

Introduction to Numerical Methods in Engineering (Charbel Farhat)   04/2006 – 06/2006
Teaching Assistant (Organized sections and held problem sessions)

INFORMATION TECHNOLOGIES

PROGRAMMING AND SCRIPTING

C   C++   Python   MATLAB   LaTeX   C#   Perl   Shell   Internet Scripting