Rashish Tandon

CONTACT Information CS 2NEo3C, ACES

Department of Computer Science The University of Texas at Austin

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RESEARCH INTERESTS

Statistical Machine Learning, Optimization, Algorithms

EDUCATION

The University of Texas at Austin

2011 - 2016

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M.S./Ph.D. in Computer Science
Cumulative GPA: 3.945/4.0
Advisor: Pradeep Ravikumar

Indian Institute of Technology Kanpur

2006 - 2011

B.Tech/M.Tech (Dual Degree) in Computer Science and Engineering

• Cumulative GPA: 9.6/10.0

Honors and Awards

- Recipient of *Microelectronics and Computer Development (MCD) Fellowship* for academic year **2011-2012** at UT Austin.
- Awarded the Academic Excellence Award for the academic years 2007-08, 2006-07 at IIT Kanpur
- Secured an All India Rank of **318** in the *Joint Entrance Examination(JEE)* for the Indian Institutes of Technology
- Awarded a Certificate of Merit by the Indian Association of Physics Teachers(IAPT) for being placed in the top 1% students in the National Standard Examination in Physics(NSEP Physics Olympiad) in 2006
- Awarded scholarship for High School and Undergraduate studies under the National Talent Search Scheme(NTSE) for the year 2004

PAPERS

On the Difficulty of Learning Power-Law Graphical Models, with Pradeep Ravikumar. (submitted)

 \mathbf{L}^{\natural} -CCCP: \mathbf{L}^{\natural} -Concave Convex Procedure, with Yoshinobu Kawahara and Kiyohito Nagano. (in preparation)

Internships

Visitor, ISIR, Osaka University, Osaka, Japan

June 2011

- Worked on energy minimization (MAP inference in graphical models) through discrete convex methods (working paper)
- Advisor : Prof. Yoshinobu Kawahara

Research Intern, MPI for Biological Cybernetics, Tubingen, Germany

May - Jul 2010

- Worked on algorithms for Sparse Nonnegative Matrix Factorization
- Advisor : Dr. Suvrit Sra
- Report : http://www.cs.utexas.edu/~rashish/nmfreport.pdf

Software Development Intern, Microsoft Bing, Redmond, WA, USA

May - Jul 2009

- Worked in the Distributed Data Storage and Computation Team
- Advisor : Daniel D. Constantin

Student Intern, University of Melbourne, Melbourne, Australia

May - Jul 2008

- Investigated and implemented querying and storage methods for a large number of data clusterings
- Advisor : Prof. James Bailey

Projects

Projects done at UT

A Survey on Sparse PCA (course project)

• Report : http://www.cs.utexas.edu/~rashish/sparse_pca.pdf

Bandit Problems - a survey (course project)

- with Harsh Pareek
- Slides: http://www.cs.utexas.edu/~rashish/bandit.pdf

Smoothed Analysis of Algorithms and the Fujishige-Wolfe Algorithm to Minimize Submodular Functions (course project)

- with Pravesh Kothari
- Report : http://www.cs.utexas.edu/~rashish/smooth.pdf

Projects done at IIT

Please visit http://www.cs.utexas.edu/~rashish/projects.html

TEACHING EXPERIENCE

Teaching Assistant, CS 378 - Statistical Learning and Data Mining

Spring 2013

University of Texas at Austin

 $\bf Teaching\ Assistant,\ ESC\ 101$ - Fundamentals of Computing

Fall 2010

- Indian Insitute of Technology Kanpur
- Taught programming in C to a class of 35 students
 Also involved in performance evaluation, designing assignments, labs and examination questions

Relevant Courses

Courses Done at UT

Algorithms: Techniques and Theory*, Advanced Probability: Learning, Inference and Networks*, Numerical Analysis: Linear Algebra, Sparsity, Structure and Algorithms, Combinatorics and Graph Theory, Learning Theory, Convex Optimization Theory

Courses Done at IIT

Data Streaming Algorithms and Systems, Randomized Algorithms, Computer Vision and Image Processing, Finite Automata on Infinite Inputs, Computer Systems Security, Quantum Computing, Machine Learning and Knowledge Discovery, Principles of Database Systems, Algorithms - I & II, Artificial Intelligence, Digital Image Processing, Theory of Computation, Discrete Mathematics, Differential Equations, Real Analysis and Multivariate Calculus, Complex Analysis and Linear Algebra

TECHNICAL SKILLS

- Programming Languages : C, C++, C#, Java
- Other Tools: Matlab, SQL, LATEX, Windows Presentation Foundation(WPF)

References Available upon request

^{* -} corresponds to courses in the current semester