

Mohit Sharma

PERSONAL DATA

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EDUCATION

CURRENT	Ph.D. Candidate in COMPUTER SCIENCE, University of Minnesota , Minneapolis Thesis topic: "Preference modeling and accuracy in recommender systems." Advisor: Prof. George KARYPIS. Thesis committee: Prof. George KARYPIS, Prof. Joseph KONSTAN, Prof. Zizhuo WANG & Prof. Rui KUANG. GPA: 3.9/4.0
2012-2016	Masters Degree in COMPUTER SCIENCE, University of Minnesota , Minneapolis Coursework: Machine Learning, Data Mining, Artificial Intelligence, Convex Optimization, Bayesian Decision Theory, Matrix Theory, Algorithmic techniques for Big Data, Parallel Computing. GPA: 3.9/4.0
JUNE 2009	Bachelor of Engineering in INFORMATION TECHNOLOGY, Delhi College of Engineering , Delhi

WORK EXPERIENCE

CURRENT	Graduate Research Assistant at UNIVERSITY OF MINNESOTA, MN Research towards Ph.D. thesis.
JUNE-NOV 2014	Research Intern at SAMSUNG RESEARCH AMERICA, CA <i>Recommender Systems</i> Developed large scale <i>recommender system</i> for Smart TV using SPARK, HADOOP. Designed algorithms for item cold-start Top- <i>n</i> recommendations.
SUMMER 2013	Research Intern at TECHNICOLOR LABS, Palo Alto, CA Developed a web-based prototype (<i>Python, MongoDB</i>) to learn users' preferences in <i>recommender systems</i> using <i>multi-arm bandit</i> algorithms.
JULY 2009 - DEC 2011	Software Development Engineer at CITRIX R&D INDIA PRIVATE LIMITED, Bangalore Worked on development of <i>Citrix Receiver</i> app for <i>Blackberry, Android</i> and <i>HTML5</i> platforms (<i>Java, Javascript</i>).
JAN 2009 - MAR 2009	Engineering Intern at HI-TECH ROBOTICS SYSTEMZ LTD, India Developed a <i>p2p</i> communication api in C++ using NAT traversal techniques for exchanging messages between nodes or bots via internet.
SUMMER 2008 DEC 2007 - FEB 2008	Engineering Intern at GOOGLE INDIA PRIVATE LIMITED, India Developed a web-based Workflow Management tool hosted internally on <i>Google AppEngine</i> (<i>Python</i>). Developed initial version of tool using <i>PHP, MySQL</i> and <i>Javascript</i> .

PUBLICATIONS

- Mohit Sharma**, Max Harper, George Karypis. Learning from sets of items in recommender systems, eKnow, IARIA 2017.
- David Anastasiu, Evangelia Christakopoulou, Shaden Smith, **Mohit Sharma**. Big Data and Recommender Systems, Big Data Issue of Novática, 2016.
- Vishwanathan N., Bandyopadhyay A. Fu H. **Sharma M.**, Johnson K., Mudge J. Ramaraj T., Onsongo G., Silverstein K., Jacob N., Le H., Karypis G., and Hu W. Augmenting Chinese hamster genome assembly by identifying regions of high confidence, Biotechnology Journal, 2016.
- Mohit Sharma**, Jiayou Zhou, Junling Hu, George Karypis. Feature-based factorized Bilinear Similarity Model for Cold-Start Top-n Item Recommendation, SIAM SDM, 2015.
- O.P Verma, **Mohit Sharma**, Nimish Gupta, Pankaj Nanda, Sandeep Chawla. A new approach to Dynamic Network Routing using Omicron Ant Colony Algorithm, IEEE ICNS, 2011.
- Mohit Sharma**, Max Harper, George Karypis. Learning from sets of items in recommender systems, ACM TiS Journal , 2017 (*Pending submission*).
- Mohit Sharma**, George Karypis. Matrix completion and Top-n recommendations, RecSys, 2017, (*Pending submission*).

PROGRAM COMMITTEE / AWARDS

Program committee: International Workshop on Machine Learning Methods for Recommender Systems, SDM (2015, 2017).

Travel awards: SDM 2015.

PROJECTS

Recommender System with Implicit Feedback using Low-Rank Matrix Factorization: Used implicit feedback with low rank matrix factorization technique to improve recommendations in massively multiplayer online games.

Using sparse inverse covariance estimation for Top-n recommender systems: Applied sparse inverse covariance estimation (GLASSO) to learn item-item similarities for Top-n recommendations.

Matrix completion using crowdsourcing: Learn missing values in ratings matrix using crowdsourcing and evaluate recommendation results.

Optimization techniques for routing in dynamic networks: Implemented Alternating Direction Method of Multipliers (ADMM) to minimize flow costs to obtain the best path in routing.

Comparison of draft assemblies of Chinese Hamster genome and Chinese Hamster Ovary: Devised methods of comparing two assemblies as no standard method of comparison is available and found the consensus regions between the two large genome datasets.

OTHERS

BandBaaja app: Wrote and released “Band Baaja” a location aware android app to discover music events across major Indian cities. Server side written in python and hosted on Google’s AppEngine platform.

Programming languages: C/C++, Python, Scala, Java

Github: <https://github.com/mohit-shrma>