

# Mohit Sharma

## PERSONAL DATA

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## EDUCATION

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CURRENT	Ph.D. Candidate in COMPUTER SCIENCE, <b>University of Minnesota</b> , Minneapolis Thesis topic: "Preference modeling and accuracy in recommender systems" Advisor: Prof. George KARYPIS   GPA: 3.9/4.0
2012-2016	Masters Degree in COMPUTER SCIENCE, <b>University of Minnesota</b> , 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, <b>Delhi College of Engineering</b> , Delhi GRADE: 76/100

## WORK EXPERIENCE

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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 <i>SPARK</i> , <i>HADOOP</i> . 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</i> , <i>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</i> , <i>Android</i> and <i>HTML5</i> platforms ( <i>Java</i> , <i>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</i> , <i>MySQL</i> and <i>Javascript</i> .

## PUBLICATIONS

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EKNOW, IARIA 2017	Learning from sets of items in recommender systems
BIG DATA NOVATICA 2016	Big Data and Recommender Systems
BIOTECHNOLOGY 2016	Augmenting Chinese hamster genome assembly by identifying regions of high confidence
SDM 2015	Feature-based factorized Bilinear Similarity Model for Cold-Start Top-n Item Recommendation
IEEE ICNS 2011	A new approach to Dynamic Network Routing using Omicron Ant Colony Algorithm

## PROGRAM COMMITTEE / REVIEWER / AWARDS

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

**Reviewer:** ICDM (2015, 2016), WWW (2016), SDM (2017), RecSys (2016), TKDD (2015), DSAA (2015).

**Travel awards:** SDM 2015.

## GRADUATE PROJECTS

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**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(CHO- K1):** 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.

## UNDERGRADUATE PROJECT

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**Routing in Computer Networks using Ant Colony Optimization & Genetic algorithm:** Designed and implemented a dynamic routing algorithm on NS2(C++, TCL) using Ant and Genetic algorithms.

## OTHER PROJECTS

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

**Cocktails app:** Wrote and released “Cocktails” app for Blackberry Playbook tablet, Android tablets and iPad using HTML5.

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