

Madhav Ram Nimishakavi

madhav@iisc.ac.in

School Address

Computer Science and Automation,
Indian Institute of Science,
Bangalore, India 560012

Permanent Address

A-118, Western Plaza,
OU Colony, Raidurg,
Hyderabad, India 500008

RESEARCH INTERESTS

I am interested in Machine Learning, Tensor Decomposition and Completion, Natural Language Understanding and Semi-supervised Learning on Graphs. Focus of my research work is on proposing new algorithms for tensor completion and applications of tensor decomposition in NLP. Recently, I have started working on semi-supervised learning on graphs.

EDUCATION

PhD, Computer Science and Automation

Indian Institute of Science (IISc), Bangalore, India

August 2014 - Present

TOPIC: Algorithms for Tensor Completion and applications of Tensor Decomposition.

C.G.P.A. 6.6 / 8

Adviser: Dr. Partha Talukdar

ME, Computer Science and Automation

Indian Institute of Science (IISc), Bangalore, India

August 2010 - June 2012

THESIS - Use of Semantics in Topic based Classification

C.G.P.A. 5.8 / 8

Adviser: Prof. M. Narasimha Murthy

BTech, Computer Science and Engineering

Sree Nidhi Institute of Science & Technology, Hyderabad, India

July 2006 - June 2010

Main Project - Container Independent Secure Data Communication

Percentage 73.55%

WORK EXPERIENCE

Microsoft: *Software Development Engineer in Test, Hyderabad, India.*

July 2012 - July 2014

INTERNSHIP EXPERIENCE

1. **Amazon Core ML:** Applied Science Intern, Bangalore, India.

June 2017 - September 2017

2. **Wipro:** Research Intern, Bangalore, India.

August 2015 - October 2015

TEACHING EXPERIENCE

1. Teaching Assistant, IISc E1 246, Natural Language Understanding.

Spring 2018

2. Teaching Assistant, IISc UE 101, Algorithms and Programming.

Fall 2016

3. Teaching Assistant, IISc E0 268, Data Mining.

Spring 2015

PUBLICATIONS

1. Madhav Nimishakavi, Bamdev Mishra, Manish Gupta and Partha Talukdar. **Inductive Framework for Multi-Aspect Streaming Tensor Completion with Side Information**. The ACM International Conference on Information and Knowledge Management (CIKM 2018), Turin, Italy.
2. Madhav Nimishakavi, Pratik Jawanpuria and Bamdev Mishra. **A Riemannian approach to trace norm regularized low-rank tensor completion**. Under review at the Conference on Neural Information Processing Systems (NIPS 2018). [arXiv:1712.01193].
3. Prateek Yadav, Madhav Nimishakavi, Naganand Yadati, Arun Rajkumar and Partha Talukdar. **Lovász Convolutional Networks**. Under review at the Conference on Neural Information Processing Systems (NIPS 2018). [arXiv:1805.11365]
4. Naganand Yadati, Madhav Nimishakavi, Prateek Yadav, Anand Louis and Partha Talukdar. **HyperGCN: Hypergraph Convolutional Networks for Semi-supervised Classification**. Under review at the Conference on Neural Information Processing Systems (NIPS 2018).
5. Madhav Nimishakavi, Manish Gupta and Partha Talukdar. **Higher-order Relation Schema Induction using Tensor Factorization with Back-off and Aggregation**. 56th Annual Meeting of the Association for Computational Linguistics (ACL 2018), Melbourne, Australia.
6. Madhav Nimishakavi, Pratik Jawanpuria and Bamdev Mishra. **A dual framework for low rank tensor completion**. Workshop on Synergies in Geometric Data Analysis, NIPS 2017, Long Beach, California, United States.
7. Madhav Nimishakavi, Uday Singh Saini and Partha Talukdar. **Relation Schema Induction using Tensor Factorization with Side Information**. International Conference on Empirical Methods in NLP (EMNLP 2016), Austin, USA.

PROGRAMMING SKILLS

C, C++, Java, C#, SQL, PL/SQL, Cypher, Python, MATLAB, PERL, L^AT_EX

OTHER PROJECTS

1. Denoising Via Block Wiener Filtering in Wavelet Domain (Course Project).
2. Analysis of Software code using LDA (Course Project).
3. Developed an operating system called PINTOS (Course Project).

GRADUATE COURSEWORK

Probability & Statistics, Computational Methods of Optimization, Data Mining, Information Retrieval, Topics in Pattern Recognition, Probabilistic Graphical Models, Digital Image Processing, Design & Analysis of Algorithms, Automata Theory & Computation, Database Management Systems, Operating Systems, Game Theory, Linear Algebra (audit), Machine Learning (audit) and Topics in Webscale Knowledge Harvesting (audit)

AWARDS & ACTIVITIES

1. Awarded student travel/volunteer scholarship for EMNLP 2016 and ACL 2018.
2. Awarded partial travel grant from Microsoft Research India for travel to ACL 2018.
3. Awarded partial travel grant from Google India for travel to EMNLP 2016.
4. Participated in Android App development hackathon, 2014 at Microsoft IDC, Hyderabad.

5. Secured an all India rank of 45 (out of 107,086 candidates) in Graduate Aptitude Test in Engineering (GATE) 2010.
6. Placement coordinator for Department of Computer Science & Automation (CSA) , IISc (Sept 2011 March 2012).
7. Captain for Open Days 2012 at Department of CSA.
8. Served as the Vice Captain for Sports Club, SNIST, Hyderabad (September 2006 - July 2008).