Naganand Yadati

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naganandy.github.io
Google Scholar

Work Experience

2022– **Postdoctoral Research Fellow,**
School of Computing,
National University of Singapore,
Advisor: Prof. Arnab Bhattacharyya.

2017 Research Intern,
International Business Machines Corporation (IBM),
Group: India Research Labs (IBM-IRL),
Topic: Canonicalisation of Open Knowledge Bases.

2012 Intern,
Integra Micro Systems,
Group: Product Team,
Topic: Android Mobile File Transfer using C Programming.

Research Focus

Deep Learning with Graph Neural Networks,
Learning Rich Structures, e.g., Causal Graphs, Hypergraphs.

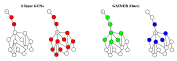
Education

2016–2021 **Ph.D,**
Department of Computer Science and Automation,
Indian Institute of Science, Bangalore, India,
Thesis: Deep Learning over Hypergraphs,
Advisor: Prof. Partha Talukdar.

2014–2016 M.Tech. in Information Technology,
International Institute of Information Technology, Bangalore, India,
Advisor: Prof. Ashish Choudhury.

Publications

8



GAINER: Graph Machine Learning with Node-specific Radius for Classification of Texts,
Naganand Yadati,
In the European Chapter of the Association for Computational Linguistics (EACL) 2024.

7

HEAL: Unlocking the Potential of Learning on Hypergraphs Enriched with Attributes and Layers,
Naganand Yadati, Tarun Kumar, Deepak Maurya, Balaraman Ravindran, and Partha Talukdar,
In the Learning on Graphs Conference (LoG) 2023,
poster.

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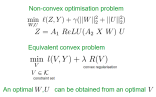
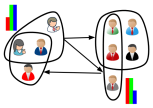


A Convex Formulation for Graph Convolutional Training: Two Layer Case,
Naganand Yadati,
In IEEE International Conference on Data Mining (ICDM) 2022,
slides | code.

5



Graph Neural Networks for Soft Semi-Supervised Learning on Hypergraphs,
Naganand Yadati, Tingran Gao, Shahab Asoodeh, Partha Talukdar, and Anand Louis,
In Proceedings of 25th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2021,
code.

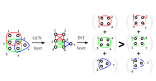
4

Knowledge Base Question Answering through Recursive Hypergraphs,
Naganand Yadati, Dayanidhi R S, Vaishnavi S, Indira K M, and Srinidhi G,
In Proceedings of the European Association for Computational Linguistics (EACL) 2021,
video.

3

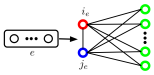
Neural Message Passing for Multi-Relational Ordered and Recursive Hypergraphs,
Naganand Yadati,
In Advances in Neural Information Processing Systems (NeurIPS) 2020,
virtual page | code.

2



NHP: Neural Hypergraph Link Prediction,
Naganand Yadati, Vikram Nitin, Madhav Nimishakavi, Prateek Yadav, Anand Louis, and Partha Talukdar,
In Proceedings of the ACM Conference on Information & Knowledge Management (CIKM) 2020,
video | code.

1



HyperGCN: A New Method For Training Graph Convolutional Networks on Hypergraphs,
Naganand Yadati, Madhav Nimishakavi, Prateek Yadav, Vikram Nitin, Anand Louis, and Partha Talukdar,
In Advances in Neural Information Processing Systems (NeurIPS) 2019,
slides | code.

Tutorial

Graph-based Deep learning in Natural Language Processing,
Shikhar Vashishth, Naganand Yadati, and Partha Talukdar,
In Empirical Methods in Natural Language Processing (EMNLP) 2019,
CoDS-COMAD 2020: 7th ACM IKDD CoDS and 25th COMAD,
code | video part 1 | video part 2.

Workshop Moderatorship

Graphs and More Complex Structures for Learning and Reasoning (GCLR),
Tarun Kumar, Deepak Maurya, Nikita Moghe, Naganand Yadati, Jeshuran Chelladurai, and Aparna Rai,
In The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI), 2021,
videos.

Program Committee Membership

2020- Neural Information Processing Systems (NeurIPS),
2021- International Conference on Machine Learning (ICML),
2020- International Conference on Learning Representations (ICLR),
2022- Learning on Graphs Conference (LoG),
2021 Association for the Advancement of Artificial Intelligence (AAAI),
2021 Transactions on Pattern Analysis and Machine Intelligence (TPAMI),
2020 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD),
2020 Neurocomputing.

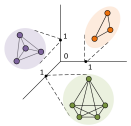
Awards

2022 Outstanding Reviewer for ICML 2022 (Top 10%),
2021 Expert Reviewer for ICML 2021,
2020 Top 10% Reviewer for NeurIPS 2020,
2019 Google Travel Grant for NeurIPS 2019.

Invited Talks

2023 School of Computing Seminar: Learning over Hypergraphs
2022 ShareChat, Deep Learning over Hypergraphs for Recommendation
2021 Microsoft Cambridge, Deep Learning over Hypergraphs
2019 Indian Institute of Science Seminar, Graph Convolution on Hypergraphs
2017 Ramaiah Institute Of Technology, Introduction to Deep Learning

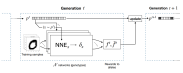
Co-authored Publications



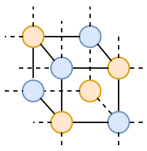
Lovasz Convolutional Networks,
Prateek Yadav, Madhav Nimishakavi, Naganand Yadati, Shikhar Vashishth, Arun Rajkumar, and Partha Talukdar, In International Conference on Artificial Intelligence and Statistics (AISTATS) 2019,
code.

KVQA: Knowledge-aware Visual Question Answering,
Sanket Shah, Anand Mishra, Naganand Yadati, and Partha Talukdar,,
In The Thirty-Third AAAI Conference on Artificial Intelligence (AAAI) 2019,
website.

Workshop Papers



Biologically Plausible Neural Networks via Evolutionary Dynamics and Dopaminergic Plasticity,
Sruthi Gorantla, Anand Louis, Christos H Papadimitriou, Santosh Vempala, and Naganand Yadati,
In Real Neurons & Hidden Units @ NeurIPS 2019.



MT-CGCNN: Integrating Crystal Graph Convolutional Neural Network with Multitask Learning for Material Property Prediction,
Soumya Sanyal, Janaki Balachandran, Naganand Yadati, Abhishek Kumar, Padmini Rajagopalan, Suchismita Sanyal, and Partha Talukdar,
In NeurIPS 2018 Workshop on Machine Learning for Molecules.

Teaching Assistantship

2018 Linear Algebra and Applications.

Academic Courses

Ph.D. Real Analysis, Linear Algebra and Applications, Probability and Statistics, and Pattern Recognition and Neural Networks.

M.Tech. Approximation Algorithms, Foundations of Big Data Algorithms, and Algorithms for Massive Data.

Skills

Programming Python, PyTorch, C

Tools LaTeX, OCTAVE

OS Linux (Ubuntu), Windows

Academic Recognitions

2014 All India Rank of **944** for Post-graduate Admissions (GATE)

2013 Summer School Award for Problem Solving in Algorithms

2010 All State Rank of **209** for University Admissions (KCET)

2008 Scores of **100/100** in Mathematics in Pre-University Course as well as 10th Grade