Priyesh Vijayan

Research: Reinforcement Learning and Graph-based Learning
Webpage: https://priyeshv.github.io | Gitpage: https://github.com/priyeshv
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EDUCATION

PHD IN CS, MCGILL UNIVERSITY & MILA| 2019 - PRESENT
Research Advisor: Doina Precup and Samira E. Kahou

MS BY RESEARCH (THESIS) IN CSE, INDIAN INSTITUTE OF TECHNOLOGY MADRAS| 2015 - 2019
Research Advisor: Balaraman Ravindran

BE IN CSE, ANNA UNIVERSITY CHENNAI| 2009 - 2013

EXPERIENCE

ROBERT BOSCH CENTRE FOR DATA SCIENCE AND AI, DEPT. OF C.S.E, IIT MADRAS
Project Officer: Feb'19 - June'19 & Project associate: Aug'17 - Jan'19 | Supervisor: Prof. Balaraman Ravindran
Project: Network Representation Learning | An IITM-Intel Collaboration

- Built a Network Representation Learning toolkit for both attributed and non-attributed graphs.

R.I.S.E LAB, DEPT. OF C.S.E, IIT MADRAS
Project Associate: July'14 – Aug'17 | Supervisor: Balaraman Ravindran
Project: Wafer data inspection | An IITM-KLA Tencor Collaboration

- Worked on extreme multi-class class-imbalance classification problem to detect defects in semi-conductor wafers.
- Proposed multi-view semi-supervised and active learning strategies to overcome the limited labeled data setup.
- Designed CNNs based shared representation learning architectures to embed Optical and Electron-Microscope Images.

ERICSSON RESEARCH
Research Intern: June'13 – June'14 | Supervisor: Shivashankar Subramanian

- Worked on learning from heterogeneous data sources and built alarm prediction models for Telecom data.

GLOBAL OPERATIONS TEAM | PAYPAL
Intern: Dec'11| Supervisor: Ms. Bhaduri Raju Naidu

- Developed a web application tool with J2EE and MYSQL for Resource mapping and Reporting

SELECTED PUBLICATIONS

REVISITING LAPLACIAN REPRESENTATIONS FOR VALUE FUNCTION APPROXIMATION IN DEEP RL
Inductive Biases in Reinforcement Learning Workshop, RLC'25
P Vijayan, P Nouri, R Rishav, S Chandar, Y Chandak, M Reymond, S E Kahou, D Precup

REVISITING LINK PREDICTION ON HETEROGENEOUS GRAPHS WITH A MULTI-VIEW PERSPECTIVE IEEE International Conference on Data Mining, ICDM'22
A Mitra, P Vijayan, R Sanam, D Goswami, S Parthasarathy & B Ravindran

BENCHMARKING AND ANALYSING UNSUPERVISED NETWORK REPRESENTATION LEARNING AND THE ILLUSION OF PROGRESS Transactions on Machine Learning Research
P Vijayan*, S Gurukar*, A Srinivasan, G Bajaj, C Cai, M Keymanesh, S Kumar, P Maneriker, A Mitra, V Patel, B Ravindran & S Parthasarathy

SCALING GRAPH PROPAGATION KERNELS FOR PREDICTIVE LEARNING
Frontiers in Big Data, section Data Mining and Management, Frontiers 2022
P Vijayan, Y Chandak, M Khapra, S Parthasarathy & B Ravindran

SEMI-SUPERVISED DEEP LEARNING FOR MULTIPLEX NETWORKS
ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD'21
A Mitra, P Vijayan, R Sanam, D Goswami, S Parthasarathy & B Ravindran

EGO-GNNS: EXPLOITING EGO STRUCTURES IN GRAPH NEURAL NETWORKS
International Conference on Acoustics, Speech, and Signal Processing, ICASSP'21
D Sandfelder, P Vijayan and W L Hamilton

INFLUENCE MAXIMIZATION IN UNKNOWN SOCIAL NETWORKS: LEARNING POLICIES FOR EFFECTIVE GRAPH SAMPLING [Best Paper Nominee]

International Conference on Autonomous Agents and Multiagent Systems, AAMAS'20
H Kamarthi, P Vijayan, Bryan Wilder, B Ravindran & M Tambe

A UNIFIED NON-NEGATIVE MATRIX FACTORIZATION FRAMEWORK FOR SEMI-SUPERVISED LEARNING ON GRAPHS
SIAM International Conference on Data Mining, SDM'20
A Mitra, P Vijayan, S Parthasarathy & B Ravindran

UNDERSTANDING DYNAMIC SCENES USING GRAPH CONVOLUTION NETWORKS
International Conference on Intelligent Robots and Systems, IROS'20
S Mylavarapu, M Sandhu, P Vijayan, M Krishna, B Ravindran, and A Namboodiri

ON INCORPORATING STRUCTURAL INFORMATION TO IMPROVE DIALOGUE RESPONSE GENERATION NLP for Conversational AI workshop, ACL'20
N Moghe, P Vijayan, B Ravindran, and M Khapra

F-GCN: FUSION GRAPH CONVOLUTIONAL NETWORKS
Workshop on Mining and Learning with Graphs, KDD 2018
P Vijayan, Y Chandak, M Khapra, S Parthasarathy & B Ravindran

PATENTS

USER CATEGORIZATION IN COMMUNICATIONS NETWORKS | United States 20150236910
Work done during internship at Ericsson R&D | Collaborator: Shivashankar Subramanian

AWARDS AND RECOGNITION

OUTSTANDING REVIEWER: ICLR'20
GRADUATE EXCELLENCE AWARD | 2020,2021,2022
McGill School of Computer Science Ph.D. Fellowship
PANICKKER AWARD | 2011-2012
Best pre-final year undergraduate across all departments.

TALKS, CONFERENCES & SUMMER SCHOOLS

INVITED TALKS Transition from Machine Learning -> Deep Learning (MLDLTISP'18), S.V.C.E | 2018
3RD RBCDSAI Workshop on Recent Progress in Data Science and AI | 2018
Think like a Startup series, IITM Incubation cell | 2016
PRESENTATIONS Representation Learning Workshop, NeurIPS'19
Eighth Statistical Relational learning Workshop, IJCAI 2018
RBC-DSAI Workshop on Recent Progress in Data Science & AI, IITM | 2017
MICROSOFT SUMMER SCHOOL ON MACHINE LEARNING, IISC | 2015
DEEP LEARNING SUMMER SCHOOL, IIIT-H | 2016

TEACHING

TEACHING ASSISTANT: INF8953DE: Reinforcement Learning (Fall'21)
COMP596-001: Network science (Fall'20, Fall'22)
COMP598-001: Introduction to Data science (Fall'20)
COMP767-001: Graph Representation Learning (Winter'20)
COMP202: Foundations of Programming (Summer'23, Fall'23)
ACM INDIA summer school on Data Science (2018)

MISC

PROGRAM COMMITTEE MEMBER: EMNLP'21, SDM'21, SDM'23, GCLR'21, NAACL-HLT'21, ADCOM'18, CoDs-COMAD'18
REVIEWER: ICLR: 2020-2023, NAACL'21, ICLR'20, ACL'19, DMKD and JDSA
SUB-REVIEWER: AAAI'17, CODS'17 & DSAA'15
FIRST RUNNER UP - IBM THE GREAT MIND TECH QUIZ | 2011 | Regional
CHAIRPERSON | SVCE-ACM STUDENT CHAPTER | 2012