Neil Shah

Lead Research Scientist, Manager
Snap Inc.
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Education

- **Ph.D**: Computer Science, Carnegie Mellon University, August 2013 - October 2017
  Advisor: Prof. Christos Faloutsos.
- **M.S**: Computer Science, Carnegie Mellon University, August 2013 - May 2017
- **B.S**: Computer Science (Minor in Mathematics), North Carolina State University, August 2010 - May 2013
  GPA: **4.0** (class rank #1), *Summa Cum Laude with Honors*

Positions

- **Snap Inc.**, Lead Research Scientist.
  My work spans the graph data mining, machine learning, and computational social science domains, specifically in the contexts of modeling user behavior and misbehavior on social platforms.
  December 2017 - present
- **Carnegie Mellon University**, Graduate Researcher.
  I worked in the Computer Science Department, on algorithms and applications for anomaly detection in large social graphs.
  August 2013 - October 2017
- **Twitch**, Visiting Researcher.
  I worked on anti-abuse technologies as a member of the Science team.
  January 2016 - May 2016
- **Microsoft Research - Redmond**, Research Intern.
  I worked on improving metrics and methods for measuring research impact for Microsoft Academic Search.
  June 2015 - August 2015
- **Lawrence Livermore National Laboratory**, Research Intern.
  I worked on developing algorithms to automatically identify patterns and anomalies in time-evolving graphs.
  June 2014 - August 2014
- **IBM - Silicon Valley**, Software Intern.
  I worked in the IBM BigInsights group, with a focus on indexing and analytics of system log data.
  May 2012 - January 2013
- **North Carolina State University**, Undergraduate Researcher.
  I worked in the Department of Computer Science on compressing and indexing large scientific datasets.
  June 2009 - April 2013

Awards & Distinctions

- ACM WSDM Outstanding Service Award, 2022
- ACM SIGCHI Best Research Paper Honorable Mention Award, 2019
- Symantec Graduate Research Fellowship Finalist, 2017
- ACM SIGKDD Best Research Paper Award, 2016
- National Science Foundation Graduate Research Fellowship, 2013
- North Carolina State University College of Engineering Senior Award for Scholarly Achievement, 2013
- North Carolina State University Department of Computer Science Senior Faculty Scholar, 2012
- National Science Foundation Research Experience for Undergraduates Grant, 2011

- North Carolina State University College of Engineering Dean's Research Assistantship, 2011
- North Carolina State University Caldwell Fellowship, 2011
- Coca-Cola Scholarship, 2010
- Zinch Scholarship, 2010
- National Merit Scholarship, 2010
- CompTIA Information Technology Merit Award, 2010
- 2nd place, National Siemens Competition in Math, Science and Technology, 2009
- 1st place, Regional Siemens Competition in Math, Science and Technology, 2009

Publications

Refereed Conference Publications

59. Zhichun Guo, William Shiao, Shichang Zhang, Yozen Liu, Nitesh Chawla, Neil Shah, Tong Zhao. *Linkless Link prediction via Relational Distillation*, ICML 2023.
58. Jiahui Shi, Vivek Chaurasiya, Yozen Liu, Shubham Vij, Yan Wu, Satya Kanduri, Neil Shah, Peicheng Yu, Nik Srivastava, Lei Shi, Ganesh Venkataraman, Jun Yu. *Embedding-based Retrieval in Friend Recommendation*, SIGIR 2023.
57. Juanhui Li, Harry Shomer, Jiayuan Ding, Yiqi Wang, Yao Ma, Neil Shah, Jiliang Tang, Dawei Yin. *Are Message Passing Neural Networks Really Helpful for Knowledge Graph Completion?*, ACL 2023.
56. Xiaotian Han, Tong Zhao, Yozen Liu, Xia Hu, Neil Shah. *MLPInit: Embarrassingly Simple GNN Training Acceleration with MLP Initialization*, ICLR 2023.
55. Mingxuan Ju, Tong Zhao, Qianlong Wen, Wenhao Yu, Neil Shah, Yanfang Ye, Chuxu Zhang. *Multi-task Self-supervised Graph Neural Networks Enable Stronger Task Generalization*, ICLR 2023.
54. William Shiao, Zhichun Guo, Tong Zhao, Vagelis Papalexakis, Yozen Liu, Neil Shah. *Link Prediction with Non-Contrastive Learning*, ICLR 2023.
53. Wei Jin, Tong Zhao, Jiayuan Ding, Yozen Liu, Jiliang Tang, Neil Shah. *Empowering Graph Representation Learning with Test-Time Graph Transformation*, ICLR 2023.
52. Yiwei Wang, Bryan Hooi, Yozen Liu, Tong Zhao, Zhichun Guo, Neil Shah. *Flashlight: Scalable Link Prediction with Effective Decoders*, LoG 2023.
51. Yiwei Wang, Bryan Hooi, Yozen Liu, Neil Shah. *Graph Explicit Neural Networks: Explicitly Encoding Graphs for Efficient and Accurate Inference*, WSDM 2023.
50. Shichang Zhang, Yozen Liu, Neil Shah, Yizhou Sun. *Explaining Graph Neural Networks with Structure-Aware Cooperative Games*, NeurIPS 2022.
49. Lingxiao Zhao, Louis Härtel, Neil Shah, Leman Akoglu. *A Practical, Progressively Expressive Graph Neural Network*, NeurIPS 2022.
48. Yu Wang, Yuying Zhao, Neil Shah, Tyler Derr. *Imbalanced Graph Classification via Graph-of-Graph Neural Networks*, CIKM 2022.
47. Raiyan Baten, Yozen Liu, Heinrich Peters, Francesco Barbieri, Neil Shah, Leonardo Neves, Maarten Bos. *Predicting Future Location Categories of Users in a Large Social Platform*, ICWSM 2023.
46. Julie Jiang, Nils Murrugarra-Llerena, Maarten Bos, Yozen Liu, Neil Shah, Leonardo Neves, Francesco Barbieri. *Sunshine with a Chance of Smiles: How does Weather Impact Sentiment on Social Media?*, ICWSM 2022.
45. Shichang Zhang, Yozen Liu, Yizhou Sun, Neil Shah. *Graph-less Neural Networks: Teaching Old MLPs new Tricks via Distillation*, ICLR 2022.
44. Wei Jin, Lingxiao Zhao, Shichang Zhang, Yozen Liu, Jiliang Tang, Neil Shah. *Graph Condensation for Graph Neural Networks*, ICLR 2022.
43. Lingxiao Zhao, Wei Jin, Leman Akoglu, Neil Shah. *From Stars to Subgraphs: Uplifting any GNN with Local Structure Awareness*, ICLR 2022.
42. Yao Ma, Xiaorui Liu, Neil Shah, Jiliang Tang. *Is Homophily a Necessity for Graph Neural Networks?*, ICLR 2022.
41. Wei Jin, Xiaorui Liu, Xiaoyu Zhao, Yao Ma, Neil Shah, Jiliang Tang. *Automated Self-Supervised Learning for Graphs*, ICLR 2022.

40. Xianfeng Tang, Yozen Liu, Xinran He, Suhang Wang, Neil Shah. *Ranking Friend Stories on Social Platforms with Edge-Contextual Local Graph Convolutions*, WSDM 2022.
39. Satyaki Sikdar, Neil Shah, Tim Weninger. *Attributed Graph Modeling with Vertex Replacement Grammars*, WSDM 2022.
38. Hyeonjeong Shin, Taehyung Kwon, Neil Shah, Kijung Shin. *Finding a Concise, Precise and Exhaustive Set of Near Bi-Cliques in Dynamic Graphs*, WSDM 2022.
37. Tong Zhao, Bo Ni, Wenhao Yu, Zhichun Guo, Neil Shah, Meng Jiang. *Action Sequence Augmentation for Early Graph-based Anomaly Detection*, CIKM 2021.
36. Yao Ma, Xiaorui Liu, Tong Zhao, Yozen Liu, Jiliang Tang, Neil Shah. *A Unified View on Graph Neural Networks as Graph Signal Denoising*, CIKM 2021.
35. Ekta Gujral, Leonardo Neves, Evangelos Papalexakis, Neil Shah. *Niche Detection in User Content Consumption Data*, CIKM 2021.
34. Shubhranshu Shekhar, Neil Shah, Leman Akoglu. *FairOD: Fairness-aware Outlier Detection*, AIES 2021.
33. Qi Yang, Weinan Wang, Lucas Pierce, Rajan Vaish, Xiaolin Shi, Neil Shah. *Online Communication Shifts in the Midst of the Covid-19 Pandemic: A Case Study on Snapchat*, ICWSM 2021.
32. Farhan Asif Chowdhury, Yozen Liu, Koustuv Saha, Nicholas Vincent, Leonardo Neves, Neil Shah, Maarten Bos. *CEAM: The Effectiveness of Cyclic and Ephemeral Attention Models of User Behavior on Social Platforms*, ICWSM 2021.
31. Aravind Sankar, Yozen Liu, Jun Yu, Neil Shah. *Graph Neural Networks for Friend Ranking in Large-scale Social Platforms*, WWW 2021.
30. Koustuv Saha, Yozen Liu, Nicholas Vincent, Farhan Asif Chowdhury, Leonardo Neves, Neil Shah, Maarten Bos. *AdverTiming Matters: Examining User Ad Consumption for Effective Ad Allocations on Social Media*, CHI 2021.
29. Tong Zhao, Yozen Liu, Leonardo Neves, Oliver Woodford, Meng Jiang, Neil Shah. *Data Augmentation for Graph Neural Networks*, AAAI 2021.
28. Brihi Joshi, Francesco Barbieri, Neil Shah, Leonardo Neves. *The Devil is in the Details: Evaluating Limitations of Transformer-based Methods for Granular Tasks*, COLING 2020.
27. Parisa Kaghazgaran, Maarten Bos, Leonardo Neves, Neil Shah. *Social Factors in Closed-Network Content Consumption*, CIKM 2020.
26. Sara Abdali, Rutuja Gurav, Siddharth Menon, Daniel Fonseca, Negin Entezari, Neil Shah, Evangelos Papalexakis. *Identifying Misinformation from Website Screenshots*, ICWSM 2021.
25. Sara Abdali, Neil Shah, Evangelos Papalexakis. *Semi-Supervised Multi-aspect Misinformation Detection with Hierarchical Joint Decomposition*, ECML-PKDD 2020.
24. Xianfeng Tang, Yozen Liu, Neil Shah, Xiaolin Shi, Prasenjit Mitra, Suhang Wang. *Knowing your FATE: Friendship, Action and Temporal Explanations for User Engagement Prediction on Social Apps*, KDD 2020.
23. Neil Shah. *FARE: Schema-Agnostic Anomaly Detection in Social Event Logs*, DSAA 2019.
22. Hamed Nilforoshan, Neil Shah. *SliceNDice: Mining Suspicious Multi-attribute Entity Groups with Multi-view Graphs*, DSAA 2019.
21. Hemank Lamba, Neil Shah. *Modeling Dwell Time Engagement on Visual Multimedia*, KDD 2019.
20. Hana Habib, Neil Shah, Rajan Vaish. *Impact of Contextual Factors on Public Snapchat Sharing*, CHI 2019. **Best Paper Honorable Mention Award**.
19. Shreya Jain, Dipankar Niranjan, Hemank Lamba, Neil Shah, Ponnurangam Kumaraguru. *Characterizing and Detecting Livestreaming Chatbots*, ASONAM 2019
18. Gisel Batista Guacho, Sara Abdali, Neil Shah, Evangelos Papalexakis. *Semi-Supervised Content-based Detection of Misinformation via Tensor Embeddings*, ASONAM 2018.
17. Nikhil Gupta, Dhivya Eswaran, Neil Shah, Leman Akoglu, Christos Faloutsos. *Beyond Outlier Detection: LookOut for Pictorial Explanation*, ECML-PKDD 2018.
16. Neil Shah, Hemank Lamba, Alex Beutel and Christos Faloutsos. *The Many Faces of Link Fraud*, ICDM 2017.
15. Da-Cheng Juan, Neil Shah, Mingyu Tang, Zhiliang Qian, Diana Marculescu, Christos Faloutsos. *M3A: Model, MetaModel, and Anomaly Detection in Web Searches*, DSAA 2017.
14. Neil Shah. *FLOCK: Combating Astroturfing on Livestreaming Platforms*, WWW 2017.
13. Bryan Hooi, Hyun Ah Song, Alex Beutel, Neil Shah, Kijung Shin, Christos Faloutsos. *FRAUDAR: Bounding Graph Fraud in the Face of Camouflage*, KDD 2016. **Best Paper Award**.

12. Bryan Hooi, Neil Shah, Alex Beutel, Stephan Gunnemann, Leman Akoglu, Mohit Kumar, Disha Makhija, Christos Faloutsos. *BIRDNEST: Bayesian Inference for Ratings-Fraud Detection*, SDM 2016.
11. Neil Shah, Danai Koutra, Tianmin Zou, Brian Gallagher, Christos Faloutsos. *TimeCrunch: Interpretable Dynamic Graph Summarization*, KDD 2015.
10. Maria Giatsoglou, Despoina Chatzakou, Neil Shah, Alex Beutel, Stephan Guenneman, Christos Faloutsos, Athena Vakali. *ND-Sync: Detecting Synchronized Fraud Activities*, PAKDD 2015.
9. Maria Giatsoglou, Despoina Chatzakou, Neil Shah, Christos Faloutsos, Athena Vakali. *Retweeting Activity on Twitter: Signs of Fraud*, PAKDD 2015.
8. Neil Shah, Alex Beutel, Brian Gallagher, Christos Faloutsos. *Spotting Suspicious Link Behavior with fBox: An Adversarial Perspective*, ICDM 2014.
7. Neil Shah, Eric Schendel, Saurabh Pendse, Sriram Lakshminarasimhan, Terry Rogers, Nagiza Samatova. *Improving I/O Throughput with PRIMACY: Preconditioning ID-Mapper for Compressing Incompressibility*, CLUSTER 2012.
6. Eric Schendel, Ye Jin, Neil Shah, Jackie Chen, Choong-Seock Chang, Seung-Hoe Ku, Stephane Ethier, Scott Klasky, Robert Latham, Robert Ross, Nagiza Samatova. *ISOBAR Preconditioner for Effective and High-throughput Lossless Data Compression*, ICDE 2012.
5. Isha Arkatkar, John Jenkins, Sriram Lakshminarasimhan, Neil Shah, Eric Schendel, Stephane Ethier, Choong-Seock Chang, Jackie Chen, Hemant Kolla, Scott Klasky, Robert Ross, Nagiza Samatova. *Analytics-driven Lossless Data Compression for Rapid In-situ Indexing, Storing and Querying*, DEXA 2012.
4. Ye Jin, Sriram Lakshminarasimhan, Neil Shah, Zhenhuan Gong, Choong-Seock Chang, Jackie Chen, Stephane Ethier, Hemant Kolla, Seung-Hoe Ku, Scott Klasky, Robert Latham, Robert Ross, Karen Schuchardt, Nagiza Samatova. *S-preconditioner for Multi-fold Data Reduction with Guaranteed User-controlled Accuracy*, ICDM 2011.
3. Sriram Lakshminarasimhan, Neil Shah, Stephane Ethier, Scott Klasky, Robert Latham, Robert Ross, Nagiza Samatova. *Compressing the Incompressible with ISABELA: In-situ Reduction of Spatio-Temporal Data*, EuroPar 2011.
2. Neil Shah, Yekaterina Shpanskaya, Choong-Seock Chang, Seung-Hoe Ku, Anatoli Melechko, Nagiza Samatova. *Automatic and Statistically Robust Spatio-temporal Detection and Tracking of Fusion Plasma Fronts*, SciDAC 2010.
1. Paul Breimyer, Guruprasad Kora, William Hendrix, Neil Shah, Nagiza Samatova. *pR: Automatic Parallelization of Data-parallel Statistical Computing Codes for R in Hybrid Multi-node and Multi-core Environments*, IADIS 2009.

Refereed Journal Publications

7. Tong Zhao, Tianwen Jiang, Neil Shah, Meng Jiang. *A Synergistic Approach for Graph Anomaly Detection with Pattern Mining and Feature Learning*, IEEE Transactions on Neural Networks and Learning Systems 2021.
6. Yike Liu, Tara Safavi, Neil Shah, Danai Koutra. *Reducing Large Graphs to Small Supergraphs: A Unified Approach*, Social Network Analysis and Mining 2018.
5. Bryan Hooi, Kijung Shin, Hyun Ah Song, Alex Beutel, Neil Shah, Christos Faloutsos. *Graph-based Fraud Detection in the Face of Camouflage*, Transactions on Knowledge Discovery from Data (TKDD) 2017
4. Neil Shah, Danai Koutra, Lisa Jin, Tianmin Zou, Brian Gallagher, Christos Faloutsos. *On Summarizing Large-Scale Dynamic Graphs*, Data Engineering Bulletin 2017.
3. Danai Koutra, Neil Shah, Joshua T. Vogelstein, Brian Gallagher, Christos Faloutsos. *DeltaCon: A Principled Massive-Graph Similarity Function with Attribution*, Transactions on Knowledge and Data Discovery 2015.
2. John Jenkins, Isha Arkatkar, Sriram Lakshminarasimhan, David Boyuka, Eric Schendel, Neil Shah, Stephane Ethier, Choong-Seock Chang, Jackie Chen, Hemant Kolla, Scott Klasky, Robert Ross, Nagiza Samatova. *ALACRITY: Analytics-driven Lossless Data Compression for Rapid In-situ Indexing, Storing, and Querying*, Transactions on Large-Scale Data-and Knowledge-Centered Systems (TLDKS) 2013.
1. Sriram Lakshminarasimhan, Neil Shah, Stephane Ethier, Scott Klasky, Robert Latham, Robert Ross, Nagiza Samatova. *ISABELA for Effective In-situ Compression of Scientific Data*, Concurrency and Computation: Practice and Experience 2011.

Refereed Workshop Publications

5. Neil Shah. *Scale-Free, Attributed and Class-Assortative Graph Generation to Facilitate Introspection of Graph Neural Networks*, KDD MLG 2020.
4. Rohan Kumar, Mohit Kumar, Neil Shah, Christos Faloutsos. *Did We Get It Right? Predicting Query Performance in E-commerce Search*, SIGIR eCom 2018.
3. Yike Liu, Tara Safavi, Neil Shah, Danai Koutra. *Reducing Million-Node Graphs to a Few Structural Patterns: A Unified Approach*, KDD MLG 2016.
2. Neil Shah, Alex Beutel, Bryan Hooi, Leman Akoglu, Stephan Gunnemann, Disha Makhija, Mohit Kumar, Christos Faloutsos. *EdgeCentric: Anomaly Detection in Edge-Attributed Networks*, ICDM DMCS 2016.
1. Yike Liu, Neil Shah, Danai Koutra. *An Empirical Comparison of the Sumarization Power of Graph Clustering Methods*, NIPS NSIS 2015.

Surveys

2. Tong Zhao, Wei Jin, Yozen Liu, Yingheng Wang, Gang Liu, Stephan Günnemann, Neil Shah, Meng Jiang. *Graph Data Augmentation for Graph Machine Learning*, arXiv (2022)
1. Srijan Kumar, Neil Shah. *False Information on the Web and Social Media*, arXiv (2018).

Tutorials

2. Rui Xue, Haoyu Han, Tong Zhao, Neil Shah, Jiliang Tang, Xiaorui Liu. *Large-Scale Graph Neural Networks: The Past and New Frontiers*, KDD 2023.
1. Tong Zhao, Kaize Ding, Wei Jin, Gang Liu, Meng Jiang, Neil Shah. *Augmentation Methods for Graph Learning*, SDM 2023.

Book Chapters

3. Sara Abdali, Gisel Bastidas, Neil Shah, Evangelos Papalexakis. *Tensor Embeddings for Content-Based Misinformation Detection with Limited Supervision*, Disinformation, Misinformation, and Fake News in Social Media.
2. Neil Shah. *Introduction to R*, Practical Graph Mining with R.
1. Kanchana Padmanabhan, Sriram Lakshminarasimhan, Zhenhuan Gong, John Jenkins, Neil Shah, Eric Schendel, Isha Arkatkar, Robert Ross, Scott Klasky, Nagiza Samatova. *In-situ Analysis in Support of Exploratory Scientific Discovery in Data-Intensive Science*, Data-Intensive Science.

Academic Experience

Invited Talks

- Keynote Speaker at RE-WORK AI Summit West (2023)
- Panel Moderator at KDD Misinformation and Misbehavior (MIS2-TrueFact) Workshop (2022)
- Invited Panelist at KDD Deep Learning on Graphs (DLG) Workshop (2022)
- Keynote Speaker for KDD Deep Learning on Graphs (DLG) Workshop (2022)
- Panel Moderator at TigerGraph AI Summit (2022)
- Invited Speaker at WSDM (2022)
- Invited Panelist at the Knowledge Graph Conference (2022)
- Invited Speaker at the Knowledge Graph Conference (2022)
- Invited Speaker at UC Riverside Computer Science and Engineering (CSE) Colloqium (2022)
- Keynote Speaker for WSDM Machine Learning on Graphs (MLoG) Workshop (2022)
- Invited Speaker Pinterest Trust and Safety Summit (2021)
- Panel Moderator for KDD Outlier Detection and Discovery (ODD) Workshop (2021)
- Keynote Speaker for KDD Machine Learning in Finance (MLF) Workshop (2021)
- Keynote Speaker for SDM Doctoral Consortium (2021)

- Keynote Speaker for SDM Minisymposium on Dynamic Networks (2020)
- Keynote Speaker for ICDM Doctoral Consortium (2019)
- Keynote Speaker for WWW CyberSafety Workshop (2018)
- Keynote Speaker for KDD Outlier Detection De-constructed Workshop (2018)
- Keynote Speaker for ECML-PKDD PhD Forum (2018)

Service

Conference Organization

- Organizing Committee for KDD (Hands-On Tutorial Chair 2023)
- Organizing Committee for ICWSM (Sponsorship Chair 2023)
- Organizing Committee for WSDM (Cup Chair 2022)
- Organizing Committee for WSDM (Cup Chair 2020)
- Organizing Committee for ASONAM (PC Chair, Industrial Track 2019)
- Organizer for ICDM Mining and Learning on Graphs (MLoG) Workshop (2022)
- Organizer for KDD Mining and Learning with Graphs (MLG) Workshop (2022)
- Organizer for CIKM Federated Learning with Graph Data (FedGraph) Workshop (2022)
- Organizer for KDD Misinformation and Misbehavior (MIS2-TrueFact) Workshop (2022)
- Organizer for KDD Misinformation and Misbehavior Mining (MIS2) Workshop (2021)
- Organizer for WWW CyberSafety Workshop (2020)
- Organizer for WWW CyberSafety Workshop (2019)
- Session Chair for KDD "Graph Learning & Social Network" track (2022)
- Session Chair for KDD "Graphs and Networks" track (2021)
- Session Chair for WWW "Graph Models" track (2021)
- Session Chair for KDD "Graph Algorithms" track (2020)
- Session Chair for DSAA "Subgraphs" track (2019)
- Session Chair for WWW "Security and Privacy" track (2018)
- Session Chair for ICDM "Social" track (2016)

Peer Review

- Senior Program Committee for AAAI (2023)
- Senior Program Committee for KDD (2022)
- Senior Program Committee for SDM (2022, 2023)
- Senior Program Committee for WSDM (2022, 2023)
- Senior Program Committee for CIKM (2021, 2022)
- Area Chair for LoG (2022)
- Program Committee for ICDM (2022)
- Program Committee for ASONAM (2022)
- Program Committee for WSDM (2019, 2020, 2021)
- Program Committee for KDD (2019, 2020, 2021)
- Program Committee for WWW (2015, 2018, 2020, 2021, 2022)
- Program Committee for SDM (2018, 2019, 2020, 2021)
- Program Committee for CIKM (2017, 2020)
- Program Committee for WWW Graph Learning and Benchmarks (GLB) Workshop (2022)
- Program Committee for WSDM Doctoral Consortium (2020)
- Program Committee for ICML LXAI Workshop (2020)
- Program Committee for ICDM Demo Session (2018, 2019)
- Program Committee for WSDM Misinformation and Misbehavior Mining Workshop (2018)
- Program Committee for KDD MLG Workshop (2017, 2018, 2019)
- Program Committee for WWW Graph Learning Benchmarks (GLB) Workshop (2021)
- Program Committee for RecSys Workshop on Graph Neural Networks for RecSys (GreS) (2021)
- Program Committee for WSDM HeteroNAM Workshop (2017, 2018)
- Program Committee for ICDM PhD Forum (2017)

- Program Committee for CIKM PhD Forum (2019)
- Reviewer for ACM TKDD Journal (2018, 2019, 2020)
- Reviewer for Springer DAMI Journal (2018, 2019)
- Reviewer for ACM TSOC Journal (2018, 2019)
- Reviewer for ACM TKDE Journal (2016, 2017)
- Reviewer for CSCW (2019)
- Reviewer for CHI (2019)
- Reviewer for WISE (2014)
- Reviewer for IPDPS (2011)

Mentorship

Internships and Collaborations

- Ms. Zhichun Guo (intern at Snap Research, 2022)
- Mr. Vedant Bhatia (intern at Snap, 2022)
- Mr. Yiwei Wang (intern at Snap Research, 2022)
- Mr. William Shiao (intern at Snap Research, 2022)
- Mr. Xiaotian Han (intern at Snap Research, 2022)
- Mr. Cazamere Comrie (intern at Snap Research, 2021)
- Mr. Lingxiao Zhao (intern at Snap Research, 2021)
- Mr. Wei Jin (intern at Snap Research, 2021 & 2022)
- Mr. Shichang Zhang (intern at Snap Research, 2021)
- Mr. Yingtong Dou (intern at Snap Research, 2021)
- Mr. Yozen Liu (RA at Snap Research, 2020)
- Ms. Qi Yang (intern at Snap Research, 2020)
- Mr. Satyaki Sikdar (intern at Snap Research, 2020)
- Mr. Yao Ma (intern at Snap Research, 2020)
- Mr. Aravind Sankar (intern at Snap Research, 2020)
- Mr. Tong Zhao (intern at Snap Research, 2020)
- Mr. Nicholas Vincent (intern at Snap Research, 2020)
- Mr. Farhan Asif Chowdhury (intern at Snap Research, 2020)
- Mr. Koustuv Saha (intern at Snap Research, 2020)
- Ms. Brihi Joshi (intern at Snap Research, 2019)
- Mr. Shiyan Yan (intern at Snap Research, 2019)
- Mr. Xianfeng Tang (intern at Snap Research, 2019 & 2020)
- Ms. Parisa Kaghzagaran (intern at Snap Research, 2019)
- Mr. Himel Dev (intern at Snap Research, 2019)
- Mr. Anis Zaman (intern at Snap Research, 2019)
- Mr. Can Liu (intern at Snap Research, 2019)
- Mr. Dipankar Niranjan (BS student, IIIT Delhi, 2018)
- Ms. Shreya Jain (BS student, IIIT Delhi, 2018)
- Mr. Hamed Nilforoshan (intern at Snap Research, 2018)
- Ms. Hana Habib (intern at Snap Research, 2018)
- Mr. Hemank Lamba (intern at Snap Research, 2018)
- Mr. Rohan Kumar (visiting CS student at CMU, 2017)
- Ms. Qicheng Huang (EE PhD student at CMU, 2017)
- Ms. Chenlei Fang (EE PhD student at CMU, 2017)
- Mr. Tianmin Zou (CS MS student at CMU, 2017)

Thesis Supervision

- Committee Member for Mr. Yingtong Dou (2021)
- Committee Member for Mr. Aravind Sankar (2021)
- Committee Member for Mr. Tong Zhao (2020)

Funding

- Contributed towards Flipkart faculty grant (with CMU: Bryan Hooi, Dhivya Eswaran, Christos Faloutsos)
- Contributed towards Wharton Customer Analytics Initiative proposal "Fraud Detection through Mining Dynamic Behavior for Group Anomalies" (with CMU: Alex Beutel and Christos Faloutsos)
- Contributed towards PNC Center for Financial Services proposal PF15003: "Fraud Detection in Financial Data" (with CMU: Alex Beutel and Christos Faloutsos)
- Contributed towards proposal DOE-NNSA-30788.1.1990222 "Quantifying Network Changes" (with CMU: Danai Koutra and Christos Faloutsos)
- Contributed towards proposal NSF IIS-1028746 "Collaborative Research: Understanding Climate Change: A Data Driven Approach" (with NCSU: Nagiza Samatova and Fredrick Semazzi)

Teaching

- Guest Lecture "Machine Learning on Graphs with Scarce Labels" for Rensselaer Polytechnic Institute MGMT-6560-02 Introduction to Machine Learning Applications, by Prof. Lydia Manikonda (2021)
- Guest Lecture "Mining Misbehavior on Large-Scale Social Platforms" for Vanderbilt CS-5981-06 Social Network Analysis, by Prof. Tyler Derr (2020)
- Guest Lecture "A Foray into Graph Mining" for USC CSCI-699 Introduction to Information Extraction, by Prof. Xiang Ren (2019)
- Guest Lecture "Graph Mining for Fraud Detection" for CMU 15-300 Research and Innovation in Computer Science, by Prof. Todd Mowry (2015)
- Teaching Assistant for CMU 15-300 Research and Innovation in Computer Science, by Prof. Todd Mowry (2015)
- Teaching Assistant for CMU 15-826 Multimedia Databases and Data Mining, by Prof. Christos Faloutsos (2014)

Technical Skills

- Cloud Platforms: GCP, AWS
- Programming Languages/Tools: Python, Java, C, C++, x86 Assembly
- Web Languages/Tools: SQL, HTML, PHP, JavaScript, CSS, WordPress
- Engineering Tools: Matlab, R
- Typesetting Tools: LaTeX, Microsoft Office, LibreOffice
- Source Code Management Tools: Git, Subversion
- Operating Systems: Mac OSX, Ubuntu Linux, Microsoft Windows

Graduate Coursework

Carnegie Mellon University

- *Advanced and Distributed Operating Systems* with Prof. David Andersen,
- *Multimedia Databases and Data Mining* with Prof. Christos Faloutsos
  Graduate Algorithms with Prof. Manuel Blum
- *Machine Learning* with Profs. Barnabas Poczos and Aarti Singh
- *Randomized Algorithms* with Prof. Bernhard Haeupler
- *Programming Language Semantics* with Prof. André Platzer

North Carolina State University

- *Automated Learning & Data Analysis* with Prof. Nagiza Samatova
- *Software Engineering* with Prof. Tao Xie,
- *Database Management Concepts & Systems* with Prof. Ting Yu

References

Available upon request.