Yogesh Dahiya

Contact Information

Theoretical Computer Science Group
The Institute of Mathematical Sciences
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Research Interests

Sketching and Streaming Algorithms, Optimization, Machine Learning

Current Position

Junior Research Fellow
The Institute of Mathematical Sciences, Chennai, India.

Education

Institute of Mathematical Sciences, Chennai, India. **2018 - present**
Ph.D. Theoretical Computer Science

Indian Institute of Technology Kanpur, UP, India. **CGPA: 9.60/10** **2016 - 2018**
MS(Research) Computer Science and Engineering
Advisor: Prof. Surender Baswana
Thesis Title: Sketching-based Preconditioning for Numerical Linear Algebra

Indian Institute of Technology BHU, Varanasi, India. **CGPA: 8.02/10** **2009 - 2013**
B.Tech, Electronics and Communication Engineering

Conference Publications

Yogesh Dahiya, Dimitris Konomis, and David P. Woodruff. **"An Empirical Evaluation of Sketching for Numerical Linear Algebra"** Proceedings of 24th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD-18**)

Yogesh Dahiya, Danish and Partha Talukdar. **"Discovering Response-Eliciting Factors in Social Question Answering"** Proceedings of 10th International AAAI Conference on Web and Social Medial (**ICWSM-16**)

Academic Experience

University of Bergen, Norway
Visitor (Host: Saket Saurabh) 05/2019 - 07/2019
Designed parameterized algorithms for Low-rank Matrix Completion and Editing problem. Also worked on designing approximation schemes for PCA in the presence of outliers.

Indian Institute of Science, Bangalore, India
Research Assistant (Advisor: Partha Talukdar) 2015 - 2016
Worked broadly on representation learning and question answering employing methods from compressed sensing, optimization and topic modelling literature.

Indian Institute of Science, Bangalore, India
Research Intern (Advisor: Chandra R. Murthy) 05/2013 - 07/2013
Worked on designing a highly configurable modular test bed for Cognitive Radio network and analyse effect of secondary non-licensed users on licensed primary users, in terms of throughput and bit error rate.

Industry Experience

Flipkart Internet Pvt. Ltd. , Bangalore, India
Software Development Engineer 2013 - 2014
Contributed in building the core of the payment platform which allowed user to pay for their transactions, save cards and use them across websites. Also contributed in developing Aesop an open source data change propagation system which replicated primary databases to secondary databases online (SQL or NoSQL) while maintaining the timeline consistency and transactional boundaries.

VizExpert India Pvt. Ltd., Bangalore, India
Member of Technical Staff, Research Intern 05/2012- 07/2012
Worked on building a pre processing toolkit for geospatial data using gpgpu methodology. Project required understanding and programming on gpus.

Talks

Talk on **Sketching for Numerical Linear Algebra** at the summer school on **Algorithmic Tractability via Sparsifiers**, Leh, India, 2019.

Teaching

Teaching Assistant for Randomized Algorithms and Algorithms for Big Data at IMSc, Fall 2019
My responsibilities included sharing lecture duties, holding office hours and creating assignments. The course was taught by Saket Saurabh

Teaching Assistant for Randomized Algorithms at IIT Kanpur, Spring 2018
My responsibilities included holding office hours and grading assignments. The course was taught by Prof. Surender Baswana

Teaching Assistant for Algorithms 2 at IIT Kanpur, Fall 2017
My responsibilities included holding office hours, creating and grading assignments. The course was taught by Prof. Surender Baswana

Participation in Conferences & Workshops

- Summer school on **Algorithmic Tractability via Sparsifiers**, Leh, India, 2019.
- Workshop on Kernelization (**WORKER**) 2019 at University of Bergen, Norway.
- GIAN course on **Sketching for Efficient Computation of Numerical Linear Algebra** taught by **David P. Woodruff**, IIT Kanpur, India, 2017.

Achievements & Activities

- Ranked in top 0.8% among 400,000 students in the prestigious **IIT-JEE** Examination 2009 and was ranked among the top 0.6% of the students in All India Engineering Entrance Examination
- Ranked 2 in Joint Entrance Screening Test(**JEST**)-2018 in theoretical computer science.
- Received **Academic Excellence Award** for academic performance for year 2017.
- Finished in top 20 in the **Inter IIT Programming Contest** 2013 and in top 30 in **Codesprint 4**, international programming contest, organized by Hacker Rank.
- Participated in the **AI Science Challenge** hosted at Kaggle, aimed at answering 8th grade multiple choice science questions. Stood 10th among 170 teams.