# CHIRAG GUPTA

**Graduate Fellow, Carnegie Mellon University**

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## RESEARCH INTERESTS

I am interested in studying foundational aspects of machine learning, broadly including topics in optimization and statistics.

## EDUCATION

| Year | Degree | Institution (Board) | GPA/% |
|------|--------|---------------------|-------|
| 2018 – now | Ph.D., Machine Learning | Carnegie Mellon University | 4.2 |
| 2012-2016 | B. Tech, Computer Science & Engineering | IIT Kanpur | 9.4/10 (distinction) |

## PAPERS

· **Support Recovery for Orthogonal Matching Pursuit: Upper and Lower bounds**
Somani, R., **Gupta, C.**, Jain, P., Netrapalli, P.
**Neural Information Processing Systems [NeurIPS '18 Spotlight]**
https://papers.nips.cc/paper/8279-support-recovery-for-orthogonal-matching-pursuit-upper-and-lower-bounds

· **ProtoNN: Compressed and Accurate kNN for Resource-scarce Devices**
**Gupta, C.**, Suggala, A. S., Goyal, A., Simhadri, H. V., Paranjape, B., Kumar, A., Goyal, S., Udupa, R., Varma, M. & Jain, P.
**International Conference on Machine Learning [ICML '17]**
http://proceedings.mlr.press/v70/gupta17a.html
*(patent filed and pending)*

## RESEARCH

**Orthogonal Matching pursuit for sparse linear regression** — link to NeurIPS'18 paper
*with Praneeth Netrapalli and Prateek Jain at Microsoft Research, India* — *Sep'17 - July'18*

**EdgeML: An ML library for machine learning on the Edge** — link to repository
*with Harsha Vardhan Simhadri at Microsoft Research, India* — *Nov'16 - Aug'17*

**ProtoNN: Compressed and Accurate kNN for Resource-scarce Devices** — link to ICML'17 paper
*with Prateek Jain at Microsoft Research, India* — *July'16 - Feb'16*

**A perceptron algorithm for learning latent variables** — Internal technical report
*with Purushottam Kar and Vinay Namboodiri, IIT Kanpur* — *Jan'15 - Apr'16*

**Reduced Set Methods in Kernel Machines using Random Features** — Internal technical report
*with Bernhard Schölkopf at the Max Planck Institute for Intelligent Systems, Tübingen* — *May'15 - July'15*

**Analytics over Problem Management Records (PMRs) for automatic complaint resolution**
*IBM, India Research Labs, Delhi* — *May'14 - July'14*

## ACHIEVEMENTS

· B.Tech in Computer Science and Engineering with distinction from IIT Kanpur.
· 3$^{\text{rd}}$ out of about 250 teams in ACM-ICPC Amritapuri Regionals, 2015 (team: tarjanhorse). Top team from IIT Kanpur in 2015, 2014 and 2013.

- · Among ten teams selected from India for the Xerox Research Innovation Challenge, 2015-16.
- · DAAD WISE scholar 2015 to the Max Planck Institute for Intelligent Systems, Tübingen, Germany.
- · Joint Entrance Exam, 2012: Ranked 242 (top 0.05%) among 506,484 candidates across India.
- · All India Engineering Entrance Exam, 2012: Ranked 13 (top 0.001%) among 1,137,256 candidates across India.
- · Among 4 selected to represent India at the International Olympiad in Informatics, Italy in 2012.
- · Stood 2$^{nd}$ all over India in the Indian National Mathematics Olympiad, 2010 and selected for International Mathematics Olympiad Training Camp (IMOTC), India.

## PARTICIPATION AT CONFERENCES AND SEMINARS

- · International Conference on Machine Learning, Sydney, 2017
- · IKDD Conference on Data Science, Pune, 2016
- · Machine Learning Summer School, Tübingen, 2015
- · Symposium on Learning, Algorithms and Complexity, IISc Bangalore, 2015

## POSITIONS OF RESPONSIBILITY

- · **Research Fellow Social Chair**, Microsoft Research (2016)
- · **Coordinator**, Special Interest Group, Machine Learning, IIT Kanpur (2015 - 2016) [website]
- · **Tutor** for ESC101, the introductory programming course at IIT Kanpur (2015)
- · **Helper**, during Machine Learning Summer School (MLSS), Tübingen (2015)
- · **Coordinator**, Association for Computing Activities (student body of CSE department) (2014-15)
- · **Coordinator**, Card and Board Games Hobby Group, IIT Kanpur (2014-15)
- · **Student representative**, Student Undergraduate Council (SUGC), IIT Kanpur (2013-14)
- · **Senator**, Students' Senate, IIT Kanpur (2012-13)