# APOORV VIKRAM SINGH

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## RESEARCH

My research interests lie at the intersection of computer science and statistical machine learning. Currently, I am working on problems in the area of spectral algorithms, clustering, and algorithms & lower-bounds for graph spectrum estimation.

## EDUCATION

**New York University, Tandon School of Engineering**
*Ph.D. Student in Computer Science* Sept 2020 – Present
Advisor: Christopher Musco

**International Institute of Information Technology, Bangalore**
*Integrated Masters of Technology* Aug 2013 – July 2018
Information Technology, Specialization: Theoretical Computer Science
Thesis: Clustering Perturbation Resilient Instances
Advisor: G. Srinivasaraghavan

## EXPERIENCE

**Visiting Researcher, INRIA Lille** Oct 2019 – Jan 2020
MODAL Team, INRIA Lille, France
Advisor(s): Hemant Tyagi (INRIA), Mihai Cucuringu (Univ. of Oxford)

**Project Associate, IISc Bangalore** Aug 2018 – Aug 2019
Department of CSA, Indian Institute of Science (IISc)
Advisor(s): Anand Louis (IISc), Amit Deshpande (Microsoft Research)

**Narendra Summer Intern, IISc Bangalore** Summer 2017
Department of CSA, Indian Institute of Science
Advisor: Anand Louis

## PUBLICATIONS

1. **Regularized Spectral Methods for Clustering Signed Networks**
(with Mihai Cucuringu, Deborah Sulem, and Hemant Tyagi)
*JMLR 2021*, (Link)
2. **On Euclidean $k$-Means Clustering with $\alpha$-Center Proximity**
(with Amit Deshpande, and Anand Louis)
*AISTATS 2019*, (Link)
3. **Approximation Algorithms for Cost-Balanced Clustering**
(with Amit Deshpande, Anand Louis, and Deval Patel)
*Preprint 2019*, (Link)

## TEACHING

**E0306: Deep Learning, Theory and Practice** Spring 2019
Grader for the course at IISc Bangalore

**E0203: Spectral Algorithms** Spring 2018
Grader for the course at IISc Bangalore

## NYU COURSES

| | | |
|---|---|---|
| Probability Theory 1 & 2 | Concentration of Measure | Info Thy Methods in Stats |
| Intro to Analysis 2 | Algorithmic ML & DS | Mathematical Statistics |
| Advanced ML | Bayesian ML | Rand Numerical LA |