Vedant **Nanda**

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Education

University of Maryland & MPI-SWS — *MD, USA & SB, Germany*

Ph.D. in Computer Science — *2019 - now*

- Second year Ph.D. student working on Trustworthy Machine Learning.
- TA for CMSC 320 (Intro to Data Science)
- GPA: 4.0/4.0
- Advisors: Krishna P. Gummadi (MPI-SWS) and John P. Dickerson (University of Maryland)

Indraprastha Institute of Information Technology (IIIT) Delhi — *New Delhi, India*

B.Tech. in Computer Science and Engineering — *2015 - 2019*

- **GPA: 9.47/10**, in top 5% of institute
- Part of dean's list for academic excellence for all years
- Selected Coursework: Numerical Methods, Calculus-I, Calculus-II, Machine Learning, Collaborative Filtering, Information Retrieval, Anthropology of Social Media, Network Administration, System Administration, Designing Human-Centered Systems

Research Interests

Human-centered Machine Learning
Fairness and Explainability in Machine Learning
Mechanism Design

Publications

Unifying Model Explainability and Robustness via Machine-Checkable Concepts — *Under Review*

Vedant Nanda, Till Speicher, John P. Dickerson, Krishna P. Gummadi, Muhammad Bilal Zafar — *2020*

Fairness Through Robustness: Investigating Robustness Disparity in Deep Learning — *Under Review*

Vedant Nanda*, Samuel Dooley*, Sahil Singla, Soheil Feizi, John P. Dickerson — *2020*

* Equal Contribution

Balancing Two-Sided Fairness and Profit in Rideshare Platforms — *Under Review*

Brian Brubach$^{\alpha\beta}$, John P. Dickerson, Sharmila Duppala, Seyed Esmaeili, **Vedant Nanda**, Aravind Srinivasan — *2020*

$^{\alpha\beta}$ Alphabetical Ordering

Balancing the Tradeoff between Profit and Fairness in Rideshare Platforms during High-Demand Hours — *AAAI & AIES (Oral)*

Vedant Nanda, Pan Xu, Karthik A. Sankararaman, John P. Dickerson, Aravind Srinivasan — *2020*

Unifying Model Explainability and Robustness via Reasoning Labels — *Workshop on Safety and Robustness in Decision Making , NeurIPS*

Vedant Nanda, Junaid Ali, Krishna P. Gummadi, Muhammad Bilal Zafar — *2019*

On the Long-term Impact of Algorithmic Decision Policies: Effort Unfairness and Feature Segregation through Social Learning — *ICML*

Hoda Heidari *, **Vedant Nanda** *, Krishna P. Gummadi — *2019*

* Equal Contribution

Stop the KillFies! Using Deep Learning Models to Identify Dangerous Selfies — *MSM Workshop, WWW*

Vedant Nanda, H.Lamba, D.Agarwal, M.Arora, N.Sachdeva, P.Kumaraguru — *2018*

Leveraging Facebook's Free Basics Engine for Web Service Deployment in Developing Regions — *ICTD*

S.Singh*, **Vedant Nanda***, R.Sen, S.Sengupta, P.Kumaraguru, K.P.Gummadi — *2017*

* Equal Contribution

Empirical Analysis of Facebook's Free Basics *SIGMETRICS (poster)*

S.Singh*, **Vedant Nanda***, R.Sen, S.Ahmad, S.Sengupta, A.Phokeer, Z.A.Farooq, T.A.Khan, P.Kumaraguru, I.A.Qazi, D.Choffnes, K.P.Gummadi *2017*

* Equal Contribution

Honors & Awards

2019-20	Dean's Fellowship awarded by University of Maryland.
2018	Best TA award for Data Structures and Algorithms given by the institute. Core computer science course taught to 300+ freshmen.
2018	Selected for SN Bose scholars program, to spend summer'18 at a US university. Awarded to only 50 undergrad and masters students across India. Deferred in favor of internship at MPI-SWS.
2018	Selected for MPI-SWS internship program.
'16, '17, '18	Dean's List for academic excellence.
'16, '17, '18	Received Chairman Merit scholarship of Rs. 100,000.
2015	Secured the prestigious KVPY scholarship, awarded to brilliant young scientists across India.
2015	Secured an All India Rank of 804 in JEE mains out of 1.5 million candidates.

Service

Reviewer	ASONAM 2019, WWW 2020, ICWSM 2020, AAAI 2021

PhD Coursework

1. **CMSC 764: Advanced Numerical Optimization**
   Spring 2020 by Dr. Tom Goldstein
   Grade: A
2. **CMSC 828M: Applied Mechanism Design for Social Good**
   Spring 2020 by Dr. John P. Dickerson
   Grade: A
3. **CMSC 726: Machine Learning**
   Fall 2019 by Dr. Soheil Feizi
   Project: showed robustness bias in real-world models. Paper from project currently under review. Grade: A
4. **CMSC 723: Computational Linguistics I**
   Fall 2019 by Dr. Hal Daumé III
   Project: adversarial attacks on NLP models. Grade: A

Skills

ML	Python, Numpy, Pytorch, Pandas, Keras, Tensorflow
Other	Matplotlib, Django, Java, Android Studio, C/C++, Git, R, MATLAB, SVN

References

1. **Dr. Krishna P. Gummadi**
   Scientific Director
   MPI-SWS
2. **Dr. John P. Dickerson**
   Assistant Professor
   University of Maryland, College Park