Nupur Kumari

Graduate Student
Robotics Institute
Carnegie Mellon University

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Education

Carnegie Mellon University
Robotics Institute, PhD — 2022 - Present
Robotics Institute, MS (GPA: 4.17/4.3) — 2021 - 2022

Indian Institute of Technology Delhi — 2012 - 2017
Integrated M. Tech in Mathematics and Computing (GPA: 9.15/10.0)

Work Experience

Adobe Research, US — May-Nov 2022
Research Intern

Adobe Inc, India — July 2017-Jan 2021
Media and Data Science Research lab

Adobe Inc, India — May-July 2016
Research Intern

Curofy, India — May-July 2015
Software Development Intern

Selected Publications

- **Nupur Kumari**, Bingliang Zhang, Richard Zhang, Eli Shechtman, Jun-Yan Zhu. *Multi-Concept Customization of Text-to-Image Diffusion*. CVPR 2023. arXiv:2212.04488
- **Nupur Kumari**, Bingliang Zhang, Sheng-Yu Wang, Eli Shechtman, Richard Zhang, Jun-Yan Zhu. *Ablating Concepts in Text-to-Image Diffusion Models*. 2023. arXiv:2303.13516
- **Nupur Kumari**, Richard Zhang, Eli Shechtman, Jun-Yan Zhu. *Ensembling Off-the-shelf Models for GAN Training*. CVPR 2022 (Oral). arXiv:2112.09130.
- Mayank Singh*, **Nupur Kumari***, Puneet Mangla, Abhishek Sinha, Balaji Krishnamurthy, Vineeth N Balasubramanian. *Attributional Robustness Training using Input-Gradient Spatial Alignment*. ECCV 2020. arXiv:1911.13073
- **Nupur Kumari***, Mayank Singh*, Abhishek Sinha*, Harshitha Machiraju, Balaji Krishnamurthy, Vineeth N Balasubramanian. *Harnessing the Vulnerability of Latent Layers in Adversarially Trained Models*. IJCAI 2019. arXiv:1905.05186

Other Publications

- Daohan Lu, Sheng-Yu Wang, **Nupur Kumari**, Rohan Agarwal, David Bau, Jun-Yan Zhu. *Content-Based Search for Deep Generative Models*. 2022. arXiv:2210.03116
- Puneet Mangla*, **Nupur Kumari***, Mayank Singh*, Balaji Krishnamurthy, Vineeth N Balasubramanian. *Data Instance Prior (DISP) in Generative Adversarial Networks*. WACV 2022. arXiv:2012.04256
- Parth Patel*, **Nupur Kumari***, Mayank Singh*, Balaji Krishnamurthy. *LT-GAN: Self-Supervised GAN with Latent Transformation Detection*. WACV 2021. arXiv:2010.09893
- Gunjan Aggarwal, Abhishek Sinha, **Nupur Kumari**, Mayank Singh. *On the Benefits of Models with Perceptually-Aligned Gradients*. Towards Trustworthy ML, ICLRW, 2020. arXiv:2005.01499
- Puneet Mangla*, **Nupur Kumari***, Mayank Singh*, Abhishek Sinha*, Balaji Krishnamurthy, Vineeth N Balasubramanian. *Charting the Right Manifold: Manifold Mixup for Few-shot Learning*. WACV 2020. Spotlight at MetaLearn, NeurIPS Workshop 2019. arXiv:1907.12087

(* equal contribution)

US Patents

- **Nupur Kumari**, Piyush Gupta, Akash Rupela, Siddarth R, Balaji Krishnamurthy, Bishal Deb, Ankita Sarkar. Generating a high-dimensional network graph for data visualization utilizing landmark data points and modularity-based manifold tearing. (US11295491B2)
- Balaji Krishnamurthy, Piyush Gupta, **Nupur Kumari**, Akash Rupela. Facilitating machine learning and data analysis by computing user-session representation vectors. (US10726325B2)

Achievements

- Qualified for **INMO (Indian National Mathematics Olympiad)** 2012 organized by HBSCE by securing second position in the region and 19 overall in India in JMO (Junior Mathematics Olympiad). 2011
- Recipient of highest CGPA in semester award for two semesters at IIT Delhi. 2016-2017

Other initiatives and service

- Reviewer: CVPR, SIGGRAPH, ICCV, ICRA, WACV, NeurIPS, ECCV, TPAMI.
- Organizer: Graphics Seminar at CMU. Oct 2021-Present
- Teaching Assistantship:
  - Learning for 3D Spring 2023, CMU
  - Machine Learning Adobe, India.
  - Linear Algebra Spring 2016, IIT Delhi
  - Discrete Mathematics Fall 2016, IIT Delhi
  - Data Mining Spring 2017, IIT Delhi
- Electrical coordinator, Robotics Club, IIT Delhi 2014-2015

Relevant Courses

Graduate:
Intro to Machine Learning
Computer Vision
Computational Photography
Learning for 3D
Geometry based Vision

Undergraduate:
Digital Image Processing
Discrete Mathematics
Principles of Artificial Intelligence
Natural Language Processing
Computational Perception and Cognition