Rishubh Parihar

Homepage | Email (rishubhp@iisc.ac.in) | Twitter | Scholar

EDUCATION

I work on developing methods to enhance controllability in vision generative models by designing interfaces beyond text to interact with these models. I am also interested in understanding the representations in the latent space of generative models and repurposing them for various downstream tasks.

EDUCATION

INDIAN INSITUTE OF SCIENCE, BANGALORE 2021 - ONWARDS
PhD in Computational and Data Sciences
Advisor: R. Venkatesh Babu

INDIAN INSTITUTE OF TECHNOLOGY, DELHI 2014-2018
Bachelor of Technology in Mathematics and Computing
Advisor: Prem Kalra

PUBLICATIONS

[8] Attribute Diffusion: Diffusion Driven Diverse Attribute Editing NeurIPS WDM 2023, WACV 2025
Rishubh Parihar , Balaji Prasanna, Raghav Magazine, Sarthak Vora, Tejan Karmali, Varun Jampani, R Venkatesh Babu

[7] PreciseControl: Enhancing T2I Diffusion Models with Fine-Grained Attribute Control ECCV 2024
Rishubh Parihar* , Sachidanand VS*, Sabariswaran Mani, Tejan Karmali, R Venkatesh Babu

[6] Text2Place: Affordance Aware Human Guided Placement ECCV 2024
Rishubh Parihar , Harsh Gupta, Sachidanand VS, R Venkatesh Babu

[5] Balancing Act: Distribution-Guided Debiasing in Diffusion Models News, CVPR 2024
Rishubh Parihar* , Abhijnya Bhat*, Abhipsa Basu, Saswat Mallick, Jogendranath Kundu, R Venkatesh Babu

[4] We never go out of Style: Motion Disentanglement by Subspace Decomposition of Latent Space AI4CC 2024
Rishubh Parihar , Raghav Magazine, Piyush Tiwari, R Venkatesh Babu

[3] Strata-NeRF: Neural Radiance Fields for Stratified Scenes ICCV 2023
Ankit Dhiman, R Srinath, Harsh Rangwani, **Rishubh Parihar** , Lokesh R Boregowda, Srinath Sridhar, R Venkatesh Babu

[2] Everything is there in Latent Space: Attribute Editing and Attribute Style Manipulation by StyleGAN Latent Space Exploration ACMMM 2022
Rishubh Parihar , Ankit Dhiman, Tejan Karmali, R Venkatesh Babu

[1] Hierarchical Semantic Regularization of Latent Spaces in StyleGANs ECCV 2022
Tejan Karmali, **Rishubh Parihar** , Susmit Agrawal, Harsh Rangwani, Varun Jampani, Manish Singh, R Venkatesh Babu

EXPERIENCE

SHARECHAT | Deep Learning Engineer

Oct 2020 - July 2021 | Bengaluru, India

- Build a multi-modal click-bait detection model for short videos for social media platforms. Leveraged a semi-supervised learning approach inspired by a mean teacher to learn from relatively small amounts of the labeled dataset effectively.
- Deployed model distillation techniques to compress large video feature extraction models into more efficient versions, significantly enhancing inference speed for a short video social media platform.

SAMSUNG RESEARCH INSTITUTE BANGALORE | Research Engineer

July 2018 - Sept 2020 | Bengaluru, India

Video motion classification for Samsung mobile phones

- Developed a motion type classification task for representation learning from videos; Annotated action categories in recognition datasets based on primitive motion types for the task. Demonstrated the effectiveness of learned representations through video retrieval tasks.

- Developed model compression techniques using quantization and pruning for near real-time inference on mobile video capture. The module was deployed across various Samsung smartphones using the SingleTake feature.

Face beautification module for Samsung mobile devices

- Developed a face image editing module for enhancement, effectively removing blemishes while preserving original skin texture. Designed an algorithm using adaptive guided filtering and wavelet representation to smooth lower-frequency components and seamlessly blend high-frequency details.
- The module can be easily adapted based on subjects' demographics: gender, age, and skin type for personalized beautification and achieve superior editing quality as compared to available commercial solutions.

HONORS AND AWARDS

- **Satish Dhawan Research Award 2024** for significant research contributions in controlling generative models.
- **Best presentation award at EECS** - Symposium 2023, IISc in visual analytics cluster
- Awarded **Pradhan Mantri Research Fellowship** in August 2021 from Govt. of India
- **Academics excellence award** for 2018 Spring semester IIT Delhi.
- Secured **All India Rank - 373** in JEE Advanced 2014 among 150000 aspirants

ACADEMIC SERVICES

- Teaching assistant for Deep Learning for Computer vision (**DS265**), IISc, Spring 2023 & 2024
- Reviewer for **WACV 2025** ,**NeurIPS 2024** , **ECCV 2024** , **CVPR 2024** , **WACV 2024** , **ICCV 2023** , **CVPR 2023** , **ECCV 2022**