

Rishubh Parihar

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RESEARCH

I develop algorithms and interfaces to control generative models, aiming to create intuitive control mechanisms that extend beyond text to assist creators and designers. I am also interested in exploring the knowledge encoded in the internal representations of large generative models and repurposing that knowledge for other tasks.

EDUCATION

INDIAN INSTITUTE OF SCIENCE, BANGALORE

PhD in Computational and Data Sciences

Advisor: R. Venkatesh Babu

2021 - ONWARDS

INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Bachelor of Technology in Mathematics and Computing

Advisor: Prem Kalra

2014-2018

PUBLICATIONS

*equal contribution

[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**